

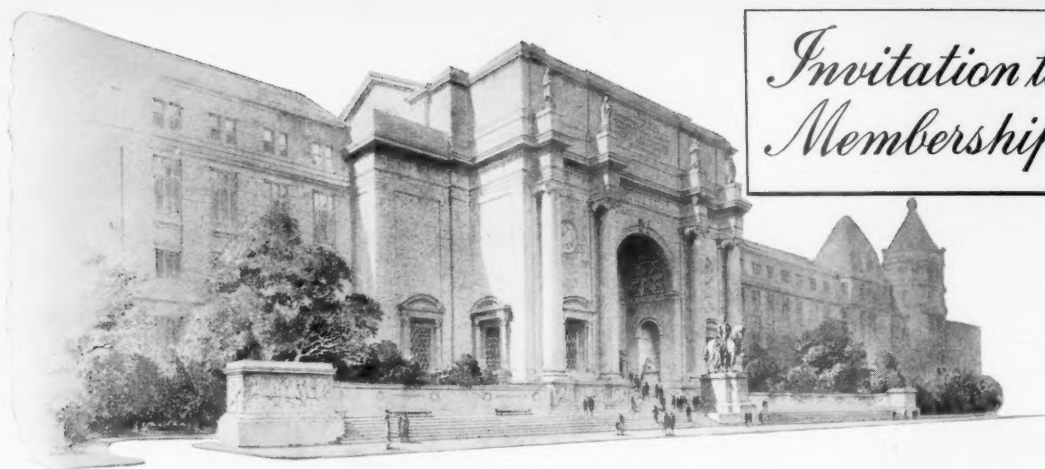
ARCHAEOLOGY



Autumn 1954

VOLUME 7 NUMBER 3

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Invitation to Membership

THE AMERICAN MUSEUM OF NATURAL HISTORY

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William A. Burns

Membership Secretary

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ARCHAEOLOGY

A MAGAZINE DEALING WITH THE ANTIQUITY OF THE WORLD

VOLUME 7 NUMBER 3

SEPTEMBER 1954

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LION FROM THE TEMPLE OF ISHTAR, NUZI. Hurrian, 1500-1350 B.C. Excavations at Nuzi in the oil fields of Iraq have revealed a town whose "Hurrian" population was ruled by Indo-European overlords known as the kings of Mitanni. Ishtar (Astarte, the Biblical Ashtoreth), one of the deities worshiped by the Nuzians, was a goddess of fertility, "clothed with pleasure and love," but she was also "the most awesome of goddesses," "the Lady of Battle," "a lioness before whom heaven and earth tremble." The shrine of Ishtar was resplendent with color. Her life-size statue was glazed blue-green, thousands of colored beads hung in strings on the walls, while the furniture was inlaid with gold and silver. It is conjectured that two blue-glazed lions stood on the edges of the statue's pedestal; two red and yellow lions crouched at her feet.

Our lion is made of five separate pieces of baked clay. These were covered with a copper "alkaline" glaze before the statue was assembled and baked. As the glaze fused, it joined the pieces together. The glaze, originally a deep blue-green, has faded.

The proficiency of the Nuzians in making glazes was one of the surprises of this excavation, which produced much interesting material for the study of a people with whom the ancient Hebrews were in close contact in the time of the patriarchs. Height 14½ inches to top of head. Harvard-American School at Baghdad Expedition of 1931.

ANCIENT ARTS AT THE FOGG MUSEUM

*By George M. A. Hanfmann
and Benjamin Rowland, Jr.
with contributions by Andrée Luce
and Stuart Cary Welch, Jr.*



HEAD OF A KING OR PRINCE. Akkadian, 2400-2200 B.C. This small head of black steatite is one of the very rare sculptures from the time of King Sargon "the Old" of Akkad. The Semitic Akkadians refined and perfected artistic traditions created by the Sumerians. Over a powerful substructure of large, simple forms the artist has carved natural forms into decorative patterns—waves of hair ending in ringlets. A grim mouth, high cheeks, and wide-open staring eyes combine to give an expression of uncanny intensity. Height 3¼ inches. Purchased with Baghdad Expedition Funds, 1929.

TEACHING IS THE PRIME FUNCTION of the Fogg Art Museum of Harvard University. It is a place of many and changing exhibitions, large and small, which serve undergraduate courses, both general and specialized. The museum also provides intensive training for graduate students preparing for museum careers. Its Egyptian, Near Eastern, and Classical antiquities as well as its magnificent examples of Central Asiatic and Far Eastern art and archaeology serve as training ground for the archaeologist and the art historian; the Fogg collections also include some objects of artistic value from the early cultures of the Americas, though the Peabody Museum is the center of research and of teaching in this field.

The enthusiasm of Harvard alumni was responsible for the first donations of antiquities, but it was under the joint directorate of Edward Waldo Forbes and Paul J. Sachs, both now retired, that the Fogg was built up to national stature. Fortunately, the initial phase of their activity coincided with that golden age of collecting, in the first quarter of this century, when ancient objects were still available in great numbers. Among the leading collectors of the era was H. P. Warren, who gave the museum a dozen vases of superlative quality. Under the late George Henry Chase, curator 1901-1945, the vase collection grew to respectable size. It gained in scope, quality and coherence when Joseph Clark Hoppin bequeathed his Attic vases to the Fogg in 1925.

In the meantime, the museum began to take part in field work—Sir Aurel Stein's pioneering explorations in Central Asia, Hetty Goldman's methodical digging of prehistoric Eutresis and historic Kolophon in Greek lands, George Andrew Reisner's and J. M. Crowfoot's excavations of the capital of Judah at Samaria, and (jointly with the Semitic Museum and the School of Oriental Research, 1928-1931) the fascinating discovery of a Hurrian civilization at Nuzi. The Fogg Museum had a small stake in the Franco-American excavations at Antioch and was a constant supporter of Thomas Whittemore's spectacular work at Hagia Sophia in Istanbul. These enterprises yielded some rare ivories from Samaria and outstanding pieces



HORUS HAWK. Egyptian, Saite or Ptolemaic, 663-30 B.C. This splendid bronze represents one of the most honored gods of Egypt. The high-flying bird of prey seemed to ancient Egyptians the most powerful creature in the sky. As god of Heavens he was identified with the Sun God, Sun and Moon were his eyes, and he incarnated himself in the king. Horus wears the double crown of Upper and Lower Egypt with a spiral (now lost). A cobra (*uraeus*) rears over his head, ready to repel evil. An amulet graces his chest. Figurines of this kind, often containing mummified hawks, were offered in temples.

The bronze is cast by the wax-mold process. Insertion of the hawk-mummy was through a rectangular opening under the tail, later closed by a separate bronze plate. The figure is soldered to a four-pronged base. Its eyes are outlined in silver. The precise and sensitive graving of detail appears to advantage in the wing feathers. Height 14¾ inches. Grenville L. Winthrop Bequest, made in 1943.

-
- GEORGE M. A. HANFMANN is Associate Professor of Fine Arts and Curator of Classical Art.
 - BENJAMIN ROWLAND, Jr. is Professor of Fine Arts, Martin A. Ryerson Lecturer in Fine Arts, and an authority on the arts of India and the Far East.
 - ANDRÉE LUCE is Assistant Curator of Oriental Art at the Fogg Museum.
 - STUART CARY WELCH, Jr. is a graduate student of Fine Arts at Harvard and a collector of Near Eastern and primitive art.
-

from Nuzi. There are samples, too, of mosaics from the Antioch campaigns.

As it stands today, the Fogg collection of ancient art is rather more comprehensive than that of most small museums. The Egyptian holdings include two fine Old Kingdom reliefs, a brilliantly carved wooden figurine and a stone portrait from the time of the Empire, and various pieces from the "Late" period. Among the Near Eastern objects are Hittite and Persian bronzes and two Assyrian reliefs. An expressive Sumerian head represents the earliest phase of Mesopotamia. Distinguished pieces of Egyptian, Hittite, and Achaemenid sculpture were included in the Grenville L. Winthrop Bequest (1943). Among the vases are fine pieces for teaching in most major aspects of the field: a large Attic

Geometric jug by a "Lion Master" and several pieces by well known Attic draftsmen (Lydos, Douris, "Berlin Painter") as well as an unusual Corinthian *lekanis* are among the outstanding objects. Though somewhat uneven in emphasis, the collection of Greek and Roman sculpture includes Roman copies of Classical athletes, a fine fragment of a Hellenistic giant or barbarian, fragmentary reliefs of an "Attic" sarcophagus with a battle of Amazons, three Roman portraits and an interesting relief from Palmyra. A growing number of bronzes is intended to supplement the sequence of Greek stone sculpture. Thus a fiery bronze griffin best represents the Archaic style, while a Classical bronze relief of a hunter supplements an unusual but artistically mediocre Greek grave stele. The comprehensive study material includes terra cottas, lamps, gems, coins and metalwork.



RED-FIGURE KYLIX. Attic Greek, by the "Foundry Painter," 480 B.C. On the interior of this wine-cup a Greek warrior, spear in hand, regards with glee an imposing scorpion depicted on his shield. This Athenian of the time of the Persian Wars seems confident of his ability to strike back as effectively as his choice for the shield device. The two-handled, high-stemmed kylix, a triumph of the Greek potter's art, is perfectly preserved. The draftsman, whose nickname is derived from his drawing of a bronze workshop on a vase in Berlin, has produced an interesting design. The round shield echoes the circle of the medallion, the vertical warrior and spear are placed slightly off center, but the tip of the spear runs over into the ornamental frame, while the helmet's edge is hidden behind it. Dilute glaze is used for the hair on the chest, muscles, ribs, and the elaborate pattern of the loin cloth. Diameter $9\frac{1}{8}$ inches. Gift of E. P. Warren, 1927.

**Ancient Arts at
the Fogg Museum**

continued



PANATHENAIIC AMPHORA. Greek, dated by the archonship of Theiophrastus, 340-339(?) B.C. Once every four years on the birthday of Athena, the 28. Hecatombaion (July-August), the athletes of Greece competed in games at Athens. Winners received as prizes oil from holy olives in specially designed jars. Tradition decreed that these "Panathenaic" amphorae should be decorated in the archaic black-figure technique, in which the background was reserved and the figures of black-glaze incised. On this elegant amphora, the advanced knowledge of anatomy developed by the late Classical age is re-translated into the old-fashioned technique, but not into the old-fashioned style. Two boxers, their hands bound with leather straps, receive instructions from an umpire. The personification of Olympic games (inscribed "Olympias") looks on. On the other side of the vase, there is a fighting Athena, small statues of Zeus and Athena on pillars and, running vertically, the inscriptions: "I am a prize from Athens" and "Theiophrastus was *archon*" (the highest official, after whom the year was designated). According to some, the date is not that of the games but of the collection of oil. Height 32 inches. Joseph C. Hoppin Bequest, 1925.

MELEAGER. Roman copy of ca. A.D. 100, after a Greek original of the fourth century B.C. Even before Homer, Greek bards celebrated the hero Meleager who killed the monstrous boar of Kalydon, only to find tragic death through his mother's curse. A great sculptor of the fourth century B.C. represented Meleager after he had slain the boar—a dynamic embodiment of defiant courage, ready to defend his trophy against all comers.

The Greek original (sometimes attributed to Skopas) is lost; this marble statue is perhaps the best of the numerous copies made in Roman times. It was found in 1895 in a Roman villa at Santa Marinella. A piece of drapery in the left armpit indicates that Meleager wore a cloak, perhaps slung over his arm. The right hand rested on the buttock. Other copies show Meleager holding his javelin with his right hand, the boar's head displayed on a tree trunk, and his dog seated at his feet. The trace of a marble strut on the left thigh may indicate the presence here of the boar's head. Height 46½ inches. Mrs. K. G. T. Webster Bequest, 1926.





MARBLE HEAD OF A WOMAN. Roman, A.D. 130-150(?). Allegedly found in Ostia, and from the early nineteenth century until 1930 kept in the collection of the Ponsonby family in England, this large head of Pentelic marble is famous and controversial. Many scholars regard it as a Greek original of the fourth century B.C. Some identify the subject as Olympias, mother of Alexander the Great, others as a portrait of Praxilla by Alexander's court sculptor Lysippos, yet others as a mournful Electra. There is Classical inspiration in the Grecian profile, and the "tragic intensity" of a mourning woman has been detected by some critics "in the almost haggard eyes and parted lips." But the details of veil and hair are deeply, even rudely cut with a running drill, a Roman device. A colossal statue of a captive barbarian woman who symbolizes an Imperial triumph or a subjugated province seems a plausible interpretation. Height 13¼ inches. Gift of Edward Waldo Forbes, 1905.



PORTRAIT OF A MAN. From Fayoum, Egypt, A.D. 250. Next to Pompeian wall paintings, Fayoum portraits are our best source for studying the style and technique of the painting of classical antiquity. They were painted on wooden boards placed over the faces of the dead, who were embalmed and swaddled in Egyptian fashion. The custom of having such portraits began with the Roman occupation (30 B.C.) and the changes of style are those of Roman art. In this example the background is grayish white; the tunic is white with pink borders; the flesh is pink; the eyes are brown.

The portrait, painted in encaustic technique (a mixture of pigment and beeswax was heated and applied with spatula and brush) on a board of squared pine wood, had cracked and much of its paint had buckled and flaked, some falling into the frame. The portrait was restored by replacing the fallen particles of paint, floating them into place on a solution of beeswax and naphtha. Height 18 inches. Gift of Denman W. Ross, 1923.

STUCCO HEAD. Northwest India, third to fifth century A.D. This head is one of many stucco fragments which once were reputed to have been found at Tash Kurgan in Central Asia but were actually excavated from one of the innumerable Buddhist sites in the vicinity of Peshawar. The material is lime plaster mixed with chopped straw and covered with a fine clay slip that originally formed the base for polychrome decoration: traces of red remain on the lips, around the eyes and ears, and traces of yellow ochre in the headdress. The head, representing a minor deity, is part of a large relief in which, following a universal practice of Gandhara sculptors, the bodies were made of mud covered with a slip like that employed for the face. This example is stylistically close to others found at Hadda and Taxila which may be dated from the third to the fifth century A.D. Although still reminiscent of Hellenistic or Roman prototypes, the face reveals a spiritual expressiveness within a realistic framework that suggests a comparison with the great masterpieces of Gothic art in France. Height 8½ inches. Gift of C. Adrian Rubel.

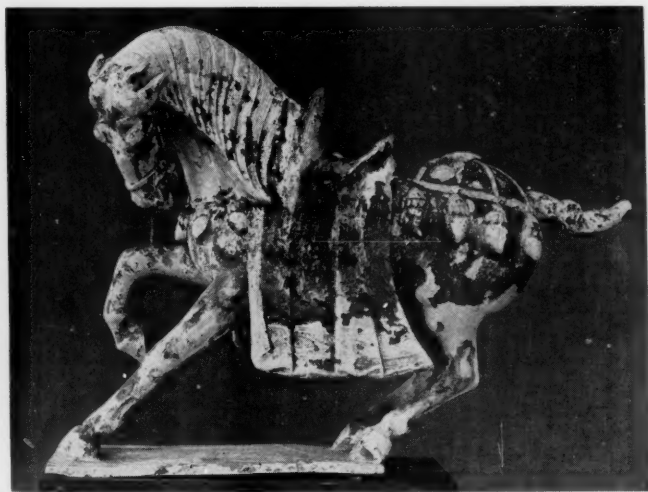


ON THE COVER:



JADE PENDANT. China, Late Chou Dynasty, fifth-third century B.C. The Fogg Museum is fortunate in having a large quantity of material reported to have been found at Chin-ts'un near Loyang in Honan Province. The tombs of the princely Han family discovered at this site have yielded a vast hoard of objects in a wide variety of materials including bronze, gold, silver, glass and jade, all marked by a singularly high level of craftsmanship. This jade pendant, assumed to have come from Chin-ts'un, typifies this standard of excellence. Formed with the use of an abrasive, a technique imposed by the hardness and brittleness of the material, the pendant is decorated with comma-shaped spirals carried out in relief and incised lines. Traces of cinnabar are visible on the translucent brown surface. The symbolic significance of jade in ancient China and the protracted and exacting process of manipulating it account at once for its relative scarcity and for its great beauty. Length $5\frac{1}{4}$ inches. Grenville L. Winthrop Bequest.

BRONZE CEREMONIAL VESSEL. China, Shang or Early Chou Dynasty, fourteenth-ninth century B.C. Traditionally classified as a "kuang," this bronze, cast in the *cire perdue* method, is exceptional in its boldness of conception and delicacy of execution. Covered with a smooth pale green patination and bearing a two-character inscription on the base of the interior, the vessel is decorated in high and low relief and intaglio. The flange on the cover terminates in a dragon's head, a bovine mask decorates the handle, and various zoomorphic forms are included on the body. A tiger and an owl, recurrent motives at Anyang, predominate. The extraordinarily crisp casting of the whole is immediately apparent in the background of squared spirals characteristic of the Shang period. Height $9\frac{1}{2}$ inches. Grenville L. Winthrop Bequest.



STATUETTE OF A HORSE. China, T'ang Dynasty, A.D. 618-906. This magnificent clay statuette originally formed part of a large retinue of men and animals placed in a tomb-chamber to serve the needs of the dead. Like so many Chinese paintings of living creatures, this caparisoned charger is a superb illustration of the Chinese artist's ability to imbue a representation of an animal with a feeling of action and animation appropriate to its species and essential character. The realization of the form, although seemingly realistic, is contained within a framework of sharp, crisp, linear definition that in itself imparts to the form both abstraction and vitality. Height $14\frac{1}{2}$ inches. Bequest made by Mrs. John Nicholas Brown.

The Oriental collections were founded with Chinese paintings, Indian sculptures and other objects presented by Dr. Denman Ross from 1916 onward. The bequest of Hervey Wetzel in 1919 added choice Chinese bronzes and Japanese sculpture. In the middle 1920's the collection assumed world-wide significance with the acquisition of wall paintings and sculpture from the famous Buddhist caves at Tun-huang in northwest China. These precious fragments were acquired by two Museum expeditions led by Langdon Warner in 1923 and 1925. During his curatorship, until his retirement in 1950, Mr. Warner built up the Oriental collection and the Rubel Asiatic Research Library to their present impressive scope.

An addition that raised the Fogg Museum to a level rivaled by few other institutions was the magnificent bequest of Grenville L. Winthrop (1943) which brought to the museum one of the largest and most beautiful collections of archaic Chinese jades and bronzes and a group of Buddhist sculptures. Most of the masterpieces of the Winthrop Collection are well known and so it seems useful to illustrate here some objects which are less familiar.

The Fogg's selection of Central and South American objects, also due to the generosity of G. L. Win-

throp, includes a series of Totonac yokes, some Valley of Mexico masks, Peruvian metalwork and pottery, and small stone sculptures. While this collection is not comprehensive, the quality is high and it offers more than a taste of the rich and varied American cultures.

A special feature of Fogg Museum activities has been the development of scientific techniques for the care and preservation of objects as well as research in ancient materials. The Edward Waldo Forbes Collection Illustrating Methods and Materials of Painting includes an instructive series of samples of wall paintings and pigments—Egyptian, Cretan, Mycenaean, Assyrian, Greek, Roman and Mayan.

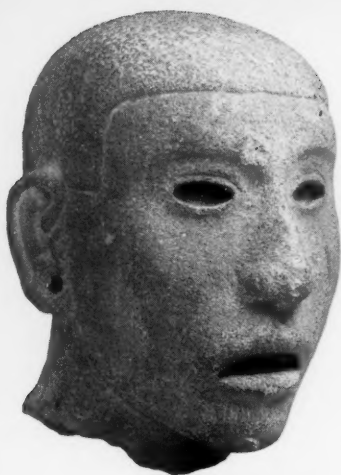
Finally, among the drawings for which the Fogg is famous, there are a number of interest to archaeologists. Some record ancient ruins or sites; others portray works of ancient art and show how they were interpreted by later masters.

The collections of the Fogg Museum reflect the enthusiasms and interests of three generations of teachers, collectors, and students. The museum's continuous growth has enabled it to bring "the real thing" before the student and to strive for that interplay of teaching, collecting, and research which is the aim and justification of a university museum.

Ancient Arts at the Fogg Museum

continued





LAVA STONE HEAD. From Vera Cruz, Aztec Period, ca. fourteenth century.

This head, probably from a seated or kneeling figure, clearly shows provincial origin compared to similar pieces from the Valley of Mexico, the center of the Aztec Empire. At some time prior to the Aztec conquest of the Vera Cruz coast, that area was occupied by people of the Tajin culture (sometimes wrongly called Totonacs) who were probably contemporaneous with the classic period of the Mayas. Their art was typified by the stone *palmas* and "yokes." The treatment of the eyes and surrounding areas on this head is remarkably similar to sculptured heads appearing on the "yokes" and *palmas*. The eyes were once inlaid with obsidian or shell. The ears, with holes for ear plugs or feather pendants, are typically Aztec, whereas the open mouth appears in Tajin and Aztec as well as many other Mesoamerican art styles. The over-all finish was accomplished by pecking with a stone. At one time the piece was coated with plaster and painted; no traces of this remain. The subject is probably not human, but divine, as there are virtually no portrait sculptures from Mesoamerica. Height 8 $\frac{1}{4}$ inches. Grenville L. Winthrop Bequest.

REPOUSSÉ GOLD EAR PLUG. Peru, Chimú culture, fourteenth or fifteenth century A.D. Ten figures, perhaps alternating gods and heroes, form a stately procession around the disk. The gods, with cat-like bodies and elaborate head-dresses, face the observer. Their tails terminate in trophy heads which typify the interests of the bellicose Chimú. The heroes are shown in profile and carry weapons over their shoulders.

Forerunners of the highly organized Incas, the Chimú were divided into sharply stratified classes. The size of one's ear plugs, it seems, was an indication of authority. The Chimú are best represented by their pottery and gold work. In this example, the masks, arms, legs, tails, and trophies intermingle in a staccato pattern well suited to the glistening material. Diameter 5 $\frac{1}{2}$ inches. Grenville L. Winthrop Bequest.



STONE YOKE [left]. Valley of Mexico. Totonac or Tajin style, Florescent period, ca. A.D. 300-900. This detail shows the fierce head of a man-jaguar whose body extends around the top, sides and bend of the large U-shaped stone piece called a "yoke." Such objects must have required many years of hard work to create and are of no apparent utilitarian value. They are now thought to be ceremonial counterparts of the protective belts worn by the ball-player priests when playing the game for which the ball courts were made. This game must have been an important religious function. One hundred such objects are known in collections in the Americas and Europe; four are now at the Fogg. Length 15 $\frac{1}{4}$ inches. Grenville L. Winthrop Bequest.

Four Firsts in Man's Recorded History

• **SCHOOL**

• **LAW**

• **TAXES**

• **WISDOM**



Writing from about 3000 B.C. A small clay tablet with an administrative record consisting of numerals and objects, inscribed not long after writing was first invented. The second space of the second column is particularly interesting; it contains the oldest known representation of the plow. This tablet is published by Adam Falkenstein in *Archaische Texte aus Uruk*, no. 357. (All dates used in this article follow the so-called short chronology which places the beginning of Hammurabi's reign about 1750 B.C. and that of Sargon the Great about 2300 B.C.)

By Samuel Noah Kramer

Clark Research Professor of Assyriology
University of Pennsylvania

THE SUMEROLOGIST is one of the narrowest of specialists in the highly specialized academic hall of learning, a well nigh perfect example of the man who "knows mostest about the leastest." He cuts his world down to that small part of it known as the Middle East and limits his history to what happened before the days of Alexander the Great. He confines his researches to the written documents discovered in Mesopotamia, primarily clay tablets inscribed in the cuneiform script, and restricts his contributions to texts written in the Sumerian language. Incredible as it may seem, however, this pinpoint historian has something of unusual interest to offer to the general reader. The Sumerologist, more than most scholars and specialists, is in a position to satisfy the universal quest for origins, for "firsts" in the history of civilization.

What for example, were man's first recorded ethical ideas and religious ideas? What did the earliest "histories," myths, epics, and hymns sound like? The first legal contracts—how were they worded? Who was the first social reformer, and when did the first tax-reduction take place? Who was the first law-giver? When did the first bicameral "congress" meet? What were man's first schools like? The Sumerologist can supply the answer to many of the questions revolving about cultural origins. Credit, however, goes not to the Sumerologist, but to the Sumerians, those gifted and practical

people who, as far as is known today, were the first to invent and develop a practical and effective system of writing.

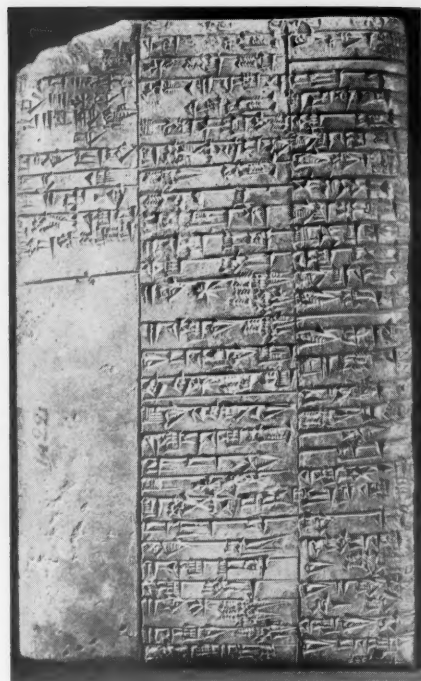
Only a century ago nothing was known even of their existence. Archaeologists who began excavating in Mesopotamia were looking, not for Sumerians, but for Assyrians and Babylonians. About these peoples they had considerable information from Greek and Hebrew sources, but of Sumer and the Sumerians they had no inkling. There was no recognizable trace either of the land or its people in the entire literature available to the modern scholar; the very name Sumer had been erased from the memory of man for over two thousand years. Yet today the Sumerians are one of the best known peoples of the ancient Near East. We know what they looked like from their statues and stelae in the more important museums. There, too, will be found an excellent cross-section of their material culture—the columns and bricks of their temples and palaces, their tools and weapons, their pots and vases, their harps and lyres, their jewels and ornaments. Moreover, Sumerian clay tablets by the tens of thousands, inscribed with their business, legal, and administrative documents, crowd the same museums; these give information about the social structure and administrative organization of the ancient Sumerians. Indeed, we can even penetrate to a certain extent into their hearts and souls. For we now have a large number of documents on which are inscribed Sumerian literary creations revealing their religion, ethics and philosophy. And all this because the Sumerians were one of the few peoples who not only invented a system of writing but also developed it into an exceedingly effective instrument of communication.

It was probably early in the third millennium B.C., almost five thousand years ago, that the Sumerians came upon the idea of writing on clay. Their first crude pictographic attempts could be used only for the simplest administrative notations. But in the course of the centuries, the scribes gradually modified their system of writing so that it lost its pictographic character and became highly conventionalized and purely phonetic. By the second half of the third millennium B.C., Sumerian writing technique had become sufficiently flexible to cope with the most complicated historical and literary compositions.

There is little doubt that some time before 2000 B.C., Sumerian men of letters actually wrote down many of their literary creations which until then had been cur-

rent in oral form only. Owing to archaeological accident, however, few literary documents of this earlier period have yet been excavated, although thousands of economic and administrative tablets have been found, and hundreds of votive inscriptions. Not until we come to the first half of the second millennium B.C. do we find several thousand tablets and fragments inscribed with Sumerian literary works; the majority of these were excavated some fifty years ago at Nippur, a site not much more than a hundred miles from modern Baghdad [See *ARCHAEOLOGY* 5 (1952) 70-75]. The documents, now in the University Museum of Philadelphia, and in the Museum of the Ancient Orient at Istanbul, range in size from large twelve-column tablets with hundreds of compactly written lines of text to tiny fragments with only a few broken lines. The literary compositions on these tablets run into the hundreds, and vary from hymns of less than fifty lines to myths of close to a thousand lines. From the point of view of form as well as content, they display a variety which is both startling and revealing. Here in Sumer, a good thousand years before the Hebrews wrote down their *Bible* and the Greeks their *Iliad* and *Odyssey*, we find a rich, mature literature consisting of myths and epic tales, hymns and lamentations, as well as proverbs, fables, and essays. It is not too much to predict that the recovery of this ancient and long forgotten literature will turn out to be one of this century's major contributions to the humanities.

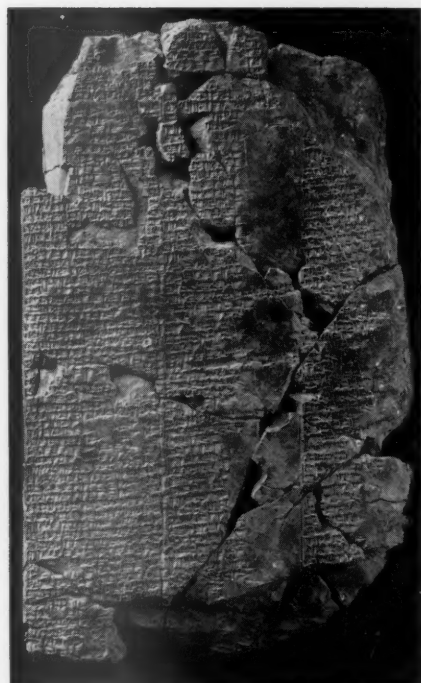
The accomplishment of this task is no simple matter and will demand the concentrated efforts of Sumerologists over a period of years. In the first place, the great majority of the sun-baked clay tablets came out of the ground broken, so that only a small part of the original contents is preserved on each piece. Offsetting this is the fact that the ancient "professors" and their students prepared numerous copies of each literary work. The lacunae of one tablet can therefore frequently be restored from duplicate pieces. To take full advantage of these duplications, however, it is essential to have the source material in published form, which frequently entails copying hundreds of tablets, a tedious, time-consuming task. But let us take those rare instances where this particular hurdle no longer blocks the way, and the complete text has been restored. All that now remains is to translate the document and get at its essential meaning. Which is easier said than done. Nevertheless, in spite of textual difficulties and lexical perplexities, a number of trustworthy translations of

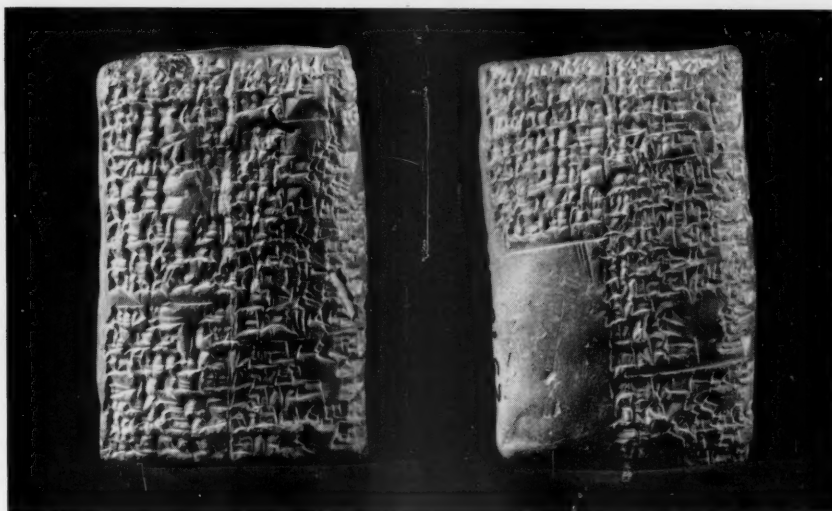


Writing from about 2500 B.C. [above]. Clay cylinder from Nippur (5 inches in diameter, $6\frac{1}{2}$ inches high) inscribed with the oldest myth on record. First published more than three decades ago by George Barton, in *Miscellaneous Babylonian Inscriptions*, no. 1, the contents of this composition in which the air-god Enlil and the mother-goddess Ninhursag play major roles, remain obscure to the present day.

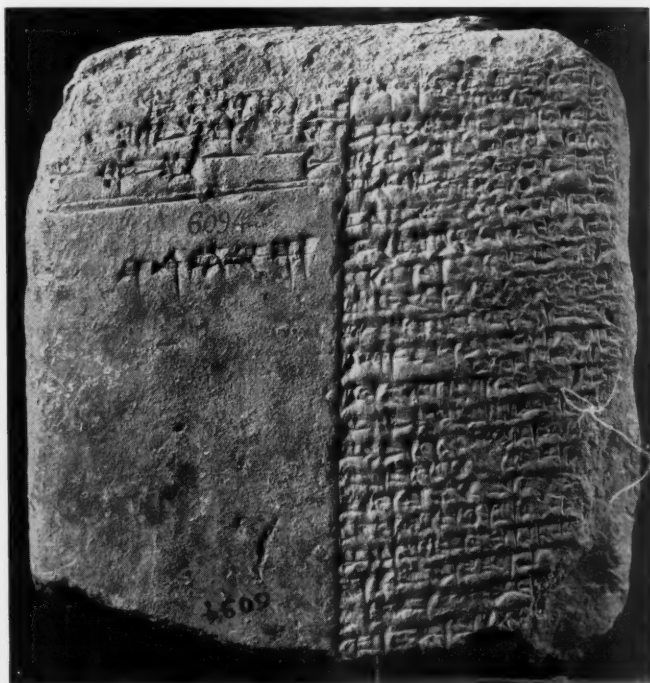
Writing from about 2100 B.C. [above, right]. Reverse of a clay tablet ($3\frac{3}{4}$ by $6\frac{1}{4}$ inches) written in the still relatively large and intricate script characteristic of the latter half of the Dynasty of Akkad or the first half of the Third Dynasty of Ur. The text inscribed on the tablet contains more than a dozen medical prescriptions for the preparation of salves and filtrates, to be applied externally, and for liquids to be taken internally; unfortunately it fails to specify the diseases for which the remedies are intended. An article dealing in considerable detail with this, the oldest medical text as yet known, will appear in the *Scientific American*.

Writing from about 1750 B.C. [right]. Obverse of a six-column tablet (6 by 10 inches) inscribed in the cuneiform script characteristic of the first half of the second millennium B.C., the period from which date most of the extant Sumerian literary works. By now the scribe had become so proficient in his craft that he could write some four hundred lines of text on a space considerably smaller than the two sides of an ordinary sheet of typewriting paper. The tablet contains a myth which may be entitled "Inanna and Enki: The Transfer of the Arts of Civilization from Eridu to Erech." A sketch of its contents will be found in the writer's *Sumerian Mythology*, pages 64-68. The composition is particularly interesting for its list of more than one hundred culture traits and complexes characteristic of Sumerian civilization, man's first recorded attempt at cultural analysis.





Oldest Library Catalogue [above]. Obverse and reverse of a small tablet dating from about 1750 B.C., inscribed with titles of Sumerian literary works. The tablet is only $1\frac{1}{2}$ by $2\frac{1}{2}$ inches in size. Small as it is, by dividing each side into two columns and using a minute script, the scribe succeeded in cataloguing the titles of sixty-two compositions. A detailed description of the contents of the tablet will be found in the writer's *Sumerian Mythology*, pages 15-18.



Schooldays [left]. Reverse of a four-column tablet ($4\frac{1}{2}$ by 5 inches) inscribed with a large part of the essay devoted to the life of a Sumerian schoolboy. The text of the ninety-one line composition was pieced together from twenty-one tablets and fragments located in the University Museum and the Museum of the Ancient Orient. The tablet shown in this photograph is of particular interest, since it bears the scribe's signature; the signs in the left-hand column below the double line which the scribe drew to indicate the end of his essay, read "the hand of Nabi-Enlil." It is extremely unlikely, however, that Nabi-Enlil was the original author; in all probability this particular copy was prepared in connection with the school curriculum.

Sumerian literary works have appeared in recent years, and almost all of them record some significant "first" in the history of man. Several of these are presented in this article. (The translations, it is to be borne constantly in mind, are tentative; further researches and discoveries will no doubt modify and improve them.)

The first of these documents might be entitled "Schooldays: The Day-to-day Life of a Sumerian Student." It describes in detail the experiences and reactions of a schoolboy, as purported to be told in large part by the boy himself. This composition is one of the most "human" documents ever excavated; its simple words reveal how little human nature has changed. We find our ancient schoolboy, like his modern counterpart, terribly afraid of coming late to school "lest his teacher cane him." When he awakes he hurries his mother to prepare his lunch. In school he misbehaves and is caned more than once by the teacher and his assistants; we are quite sure of the rendering "caning" since the Sumerian sign consists of "stick" and "flesh." As for the teacher, his pay seems to have been as meager then as it is now; at least he is happy to make a "little extra" from the parents to eke out his earnings.

The composition, no doubt the creation of one of the "professors" in the "tablet-house," begins with a direct question to the pupil:

"Schoolboy, where did you go from earliest days?"
The boy answers:

"I went to school." The author then asks:

"What did you do in school?" The pupil's reply reads in part:

"I recited my tablet, ate my lunch, prepared my (new) tablet, wrote it, finished it; then they assigned me my oral work, and in the afternoon they assigned me my written work. When school was dismissed, I went home, entered the house and found my father sitting there. I told my father of my written work, then recited my tablet to him, and my father was delighted. . . . When I awoke early in the morning I faced my mother and said to her, 'Give me my lunch, I want to go to school.' My mother gave me two 'rolls' and I set out; my mother gave me two 'rolls' and I went to school. In school the monitor in charge said to me, 'Why are you late?' Afraid and with pounding heart, I entered before my teacher and made a respectful curtsy."

Curtsy or not, it seems to have been a bad day for

our pupil; he had to take canings from various members of the school staff for such indiscretions as talking, standing up, and walking out of the gate. Worst of all, the headmaster himself said:

"Your hand (copy) is not satisfactory," and caned him. This seems to have been too much for the lad, and he suggests to his father that it might be a good thing to invite the headmaster home and mollify him with some presents—by all odds the first recorded case of "apple-polishing" in the history of man. The composition then continues: "To that which the schoolboy said his father gave heed. The teacher was brought from school, and after entering the house, he was seated in the seat of honor. The schoolboy attended and served him, and whatever he had learned of the art of tablet-writing he unfolded to his father." The father then winced and dined the teacher, "dressed him in a new garment, gave him a gift, put a ring on his hand." Warmed by this generosity, the teacher reassures the aspiring scribe in poetic words:

"Young man, because you did not neglect my word, did not forsake it, may you reach the pinnacle of the scribal art, may you achieve it completely. . . . Of your brothers may you be their leader, of your friends may you be their chief, may you rank the highest of the schoolboys. . . . You have carried out well the school's activities, you have become a man of learning."

Let us turn to the first law-givers. Until five years ago the most ancient law code known was that of the Babylonian king, Hammurabi, who ruled about 1750 B.C. Though written in the cuneiform script, its language is not Sumerian, but Akkadian, a Semitic dialect spoken by Arabian nomads who conquered the Sumerians and adopted their system of writing. Sandwiched in between a boastful prologue and a curse-laden epilogue, are close to three hundred laws which run the gamut of man's possible deeds and misdeeds. The diorite stele on which the code is inscribed now stands solemn and impressive in the Louvre for all to see and admire. From the point of view of fulness of legal detail and state of preservation, it is still the most impressive ancient law document yet uncovered, but not from the point of view of age and antiquity. For in 1947, there came to light a law code promulgated by King Lipit-Ishtar, who preceded Hammurabi by more than one hundred and fifty years.

The Lipit-Ishtar code is inscribed not on a stele but on sun-baked clay tablets, and is written not in Akkad-



Ur-Nammu, the first "Moses" on record. The scenes are part of the Ur-Nammu stele excavated by Leonard Woolley at Ur; full details are given in the *Museum Journal*, Vol. 18, pages 75 ff. In the middle panel Ur-Nammu is shown twice, making libations on the one side to the moon-god Nanna, the tutelary deity of Ur, and on the other side, to Nanna's wife Ningal. In the lower panel Ur-Nammu is depicted in the act of carrying the basket, the pickaxe, and other building implements for the construction of Nanna's temple at Ur. In the upper panel, on the lower half of his garment, is an inscription "Ur-Nammu, the king of Ur."

ian but in the older Sumerian language. The tablets were excavated some fifty years ago, but remained largely unidentified all these years. As now reconstructed and translated, the code is seen to have contained a prologue, an epilogue, and an unknown number of laws, thirty-seven of which are preserved. But Lipit-Ishtar's claim to fame as the world's first law-giver was short-lived. For the very next year, Taha Baqir, of the Iraq Museum, and Albrecht Goetze, of Yale, announced the discovery of an Akkadian law-collection which seemed to antedate the Lipit-Ishtar code by several decades. And in 1952, while studying the tablet collection of the Istanbul Museum of the Ancient Orient, I copied a law-code promulgated by Ur-Nammu, the Sumerian king who founded the "Third Dynasty of Ur." According to the lowest chronological estimates, Ur-Nammu reigned about 2050 B.C., some three hundred years before Hammurabi.

The tablet on which the Ur-Nammu law code is inscribed is only about eight inches by four. It is divided into eight columns, four on each side. Each column contains about forty-five small ruled spaces; less than half of these are now legible. The obverse contains a long prologue, only partially intelligible because of numerous breaks. Briefly put, it runs as follows:

After the world had been created, and after the fate of the land Sumer and of the city Ur—the Biblical Ur of the Chaldees—had been decided, An and Enlil, the

two leading deities of the Sumerian pantheon, appointed the moon-god Nanna as the king of Ur. Then one day, Ur-Nammu was selected by the god Nanna to rule over Sumer and Ur as his earthly representative. The new king's first acts had to do with the political and military safety of Ur and Sumer. In particular he found it necessary to do battle with the bordering city-state of Lagash which was expanding at Ur's expense. He defeated and put to death its ruler Namhani, and then "by the power of Nanna, the king of the city" he reestablished Ur's former boundaries.

Now came the time to turn to internal affairs and to institute social and moral reforms. He removed the "chiselers" and the grafters, or as the code describes them, the "grabbers" of the citizens' oxen, sheep and donkeys. He established and regulated honest weights and measures. He saw to it that "the orphan did not fall a prey to the wealthy," "the widow did not fall a prey to the powerful," "the man of one shekel did not fall a prey to the man of one mina (sixty shekels)." The laws themselves probably began on the reverse of the tablet, but they are so badly damaged that only five can be restored with some certainty. One concerns a "witchcraft" trial settled by the water ordeal; another treats of the return of a slave to his master. But it is the other three laws which are of special importance for the history of man's social and spiritual growth. They show that even before 2000 B.C., the law of "eye for eye"

Ur-Nanshe, king of Lagash. This ruler, who lived some 150 years before Urukagina, founded the aggressive Lagash dynasty which in the course of time developed the first oppressive and deeply resented bureaucracy in man's recorded history. Ur-Nanshe is shown in this limestone plaque as a man of peace, surrounded by his children and courtiers; in the upper scene he is carrying an earth-filled basket for the initiation of building operations; in the lower, he is sitting and drinking at a feast celebrating their completion. (From *Découvertes en Chaldée* by Ernest de Sarzec and Leon Heuzey, plate 2 bis.)



and "tooth for tooth" had given way to the more humane approach in which a money fine was substituted as a punishment. Thus, if a man injures the foot of another man with a weapon, he pays ten shekels. If a man severs the . . . bone of another man with a weapon, he pays one silver mina. If a man cuts off the nose of another man with a *geshpu* instrument, he pays two-thirds of a mina.

How long will Ur-Nammu retain his crown as the world's first law-giver? Not for long, I fear. There are indications that there were law-givers in Sumer long before Ur-Nammu and sooner or later one of their codes will be excavated. Indeed we actually have a Sumerian document older by some three hundred years than the Ur-Nammu law tablet; though not a law code it records a sweeping social reform, including a rather enviable tax-reduction program. Inscribed on clay cones, it was excavated by the French almost seventy-five years ago in the ruins of Lagash, the very city-state which gave so much trouble to Ur-Nammu, according to the preamble of his law code. By and large, therefore, its contents have been known for many years. But as a result

of recent Sumerological progress, this document can now be more adequately interpreted and evaluated.

The state of Lagash, early in the third millennium B.C., consisted of a small group of prosperous towns, each clustering about a temple. Its Sumerian-speaking citizens were largely farmers and cattle-breeders, boatmen and fishermen, merchants and craftsmen. Its economy was partly socialistic and state-controlled, partly capitalistic and free. In theory the soil belonged to the god of the city-state, and therefore to the temple which held it in divine trust for all the citizens. In practice the temple's main responsibility was to supervise the irrigation projects and water-works. Because of Lagash's hot, rainless climate, the man-made canals, irrigation ditches, and reservoirs were so essential to the life of the community that they had to be publicly administered. The temple also owned farmland which it rented out to the citizens. In practically all other respects the economy was relatively free. Riches and poverty, success and failure, were largely the result of private enterprise and individual drive. Private ownership was



Stele of the Vultures: War scenes depicting Eannatum, Ur-Nanshe's grandson, leading the Lagashites to battle and victory. Eannatum, who preceded Urukagina by more than a century, was the great conquering hero of the Lagash Dynasty, which came to an inglorious end when defeated by Lugalzaggisi of Umma. In between and all around the figures, wherever space permits, is inscribed the oldest historiographic document as yet known to man: an inscription recording Eannatum's victory over the Ummaites and the treaty of peace which he forced upon them. Full details of the stele and its inscription are to be found in Heuzey and Thureau-Dangin's *Restitution matérielle de la Stèle des Vautours*.

the rule, and even the poor owned property and cattle. The more enterprising artisans and craftsmen could sell their products in the free market. Traveling merchants carried on a thriving trade with the surrounding states. The citizens of Lagash were proud of their civil rights and conscious of their political obligations. They realized the value of freedom—their word for it was *amargi*—and cherished it as an essential part of their way of life.

But about 2500 B.C., new and power-hungry rulers came to the fore in Lagash. Smitten with grandiose ambitions, they resorted to imperialistic wars and bloody conquests. At first they met with success, and for a short while actually extended the sway of Lagash over Sumer as a whole, and even over several neighboring states. The initial victories proved ephemeral, however, and in less than a century Lagash was reduced to its earlier boundaries and former status. It was in the course of these useless wars and their tragic aftermath that the citizens of Lagash were deprived of their political freedom. For in order to raise armies the rulers found it necessary to infringe on the personal rights of

the citizen and to tax his property to the limit. Under the impact of war, they met with little opposition. But when the emergency was over, the palace coterie was unwilling to relinquish domestic controls. These had proved highly profitable; indeed our ancient bureaucrats had devised sources of revenue and income, taxes and imposts, which in some ways might be the envy of their modern counterparts.

But let the hoary historian who lived in Lagash more than four thousand years ago tell it in his own words: The inspector of the boatmen seized the boats. The cattle inspector seized the large cattle, seized the small cattle. The fisheries inspector seized the fisheries. When a citizen of Lagash brought a sheep to the palace for shearing, he had to pay five shekels if the wool was white. If a man divorced his wife, the ruler (*ishakku*, in Sumerian) got five shekels, his vizier got one shekel. If a perfumer made an oil preparation, the *ishakku* got five shekels, the vizier one shekel, and the palace steward another shekel. As for the temple and its property, the *ishakku* took it over. To quote our narrator: "The oxen of the gods plowed the *ishakku's* onion

patches; the onion and cucumber patches of the *ishakku* were located in the gods' best fields." In addition, the more important temple officials were deprived of many donkeys and oxen, as well as of much grain.

Even death brought no relief from levies and taxes. When a man was brought to the cemetery for burial, officials and parasites were on hand to relieve the bereaved family of quantities of barley, bread, date-wine, and various furnishings. From one end of the land to the other, our reporter observes bitterly, "there were the tax collectors." No wonder that the palace waxed fat and prosperous. Its lands formed one vast, continuous and unbroken estate. In the words of our commentator, "The houses of the *ishakku* and the fields of the *ishakku*, the houses of the palace harem and the fields of the palace harem, the houses of the palace nursery and the fields of the palace nursery crowded each other side to side."

At this low point in the affairs of Lagash, our chronicler tells us, a new and god-fearing ruler came to the fore, Urukagina by name, who restored justice and freedom to the long-suffering citizens. He removed the inspector of the boatmen from the boats. He removed the cattle inspector from the cattle, large and small. He removed the fisheries inspector from the fisheries. He removed the collector of the silver which had to be paid for the shearing of the white sheep. When a man divorced his wife, neither the *ishakku* nor his vizier got anything. When a perfumer made an oil preparation, neither the *ishakku* nor the vizier nor the palace steward got anything. When a man was brought to the cemetery for burial, the officials received considerably less of the dead man's goods than formerly. Temple property was now highly respected. From one end of the land to the other, our on-the-scene reporter observes joyously, "there was no tax collector." He, Urukagina, "established the freedom of the citizens of Lagash."

How stable and enduring were these reforms? It would be pleasant to say that the Lagashites lived happily ever after. But Urukagina and his reforms were soon "gone with the wind." His reign lasted less than ten years, and he and his city were soon overwhelmed by the ruler of the neighboring state of Umma, a fellow-Sumerian by the name of Lugalzaggisi. Nor did Urukagina's cruel and seemingly unjust fate evoke complaints against Providence. According to the teaching of the Sumerian philosophers, the gods had their motives, though these were often inscrutable.

Which brings us to Sumerian wisdom, particularly the practical wisdom gleaned from their proverbs and sayings. These aphorisms and adages, though compiled and written down almost four thousand years ago, reveal character and personality basically like our own, and we have little difficulty in recognizing in them reflections of our own attitudes, weaknesses, confusions and dilemmas. (The majority of the proverbs here translated are inscribed on tablets dating from approximately the eighteenth century B.C. The remainder are on tablets dating from the first millennium B.C., but there is good reason to believe that they were first compiled a thousand years earlier.)

For example, we find the whiner complaining:

When shares were allotted to all,
Misfortune was allotted as my share.

There were the perpetual explainers who paraded their transparent excuse in spite of the clearest evidence to the contrary. Of them, the ancients said:

Can one conceive without intercourse,
Can one get fat without eating!

What the Sumerians thought of their misfits is shown in their saying:

You are put in water, the water becomes foul,
You are put in a garden, the fruit begins to rot.

As in our own times, confusion and hesitation in economic matters beset not a few; our ancients put it thus:

We are doomed to die, let us spend;
We will live long, let us save.

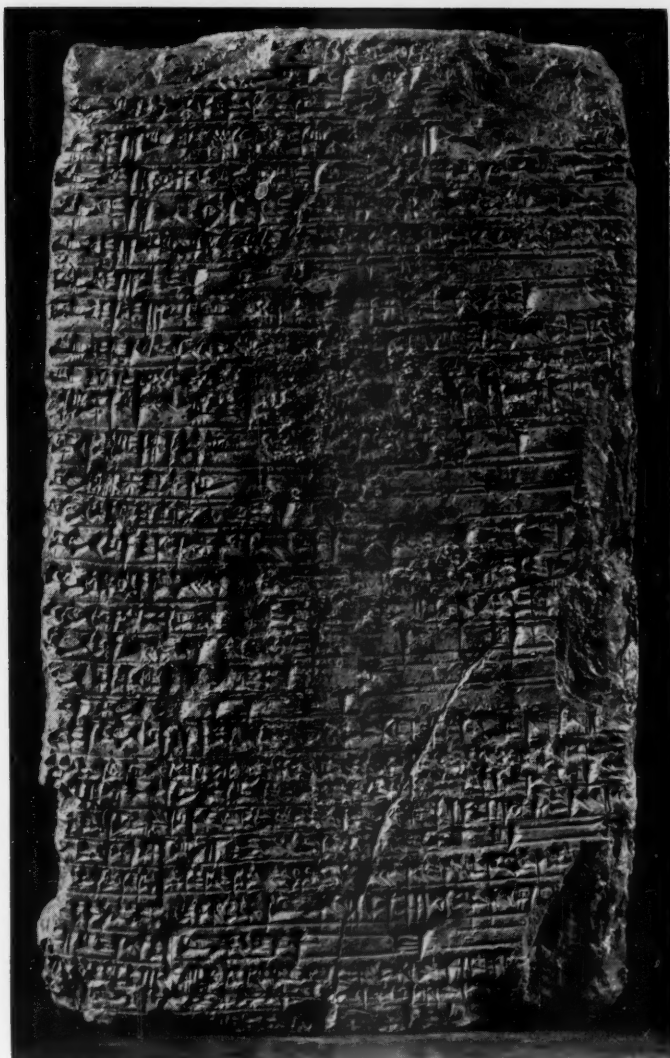
Or in another way:

"The early barley will thrive,"—how do we know?
"The late barley will thrive,"—how do we know?

Sumer had, of course, its perennial poor with their eternal troubles, and these are rather nicely summed up in the contrasting lines:

The poor man is better dead than alive;
If he has bread, he has no salt,
If he has salt, he has no bread,
If he has meat, he has no lamb,
If he has a lamb, he has no meat.

Occasionally, the poor man realized he was a failure through no fault of his own but because he had tied up with the wrong associates, or, as he put it:



A "proverb" tablet excavated in the 1952-53 season of the excavations of the Joint Nippur Expedition, and here published for the first time. The tablet is 5 by 8 inches in size, and its obverse (shown here) contains twenty-nine proverbs; the reader can count them by noting the ruled lines which separate each proverb from the one preceding it. Sumerian men of letters tended to be quite systematic in arranging their "proverb" collections; the majority of the proverbs here photographed, for example, begins with the Sumerian word for "man" and "flesh."

SCHOOL • LAW • TAXES • WISDOM CONTINUED

I am a thoroughbred steed,
But I am hitched to a mule
And must draw a cart,
And carry reeds and stubble.

If, however, he was poor because of his own dull wits and lack of drive, he was described in these words:

The donkey drinks mud
Wheresoever it lies down.

Of the poor artisan who, ironically enough, could not afford to have the very things he made, the Sumerian said:

The valet always wears dirty clothes.

The so-called weaker sex is well represented among the Sumerian sayings, and not always to advantage. The "gold-digger" seems to have been unknown in Sumer, but it had its share of practical virgins. As one marriageable young lady, who has grown weary of waiting for the ideal match and decided to stop picking and choosing, said:

Who is well established, who is wind,
For whom shall I hold my love?

And there was, of course, the restless, discontented wife, who just did not know what was wrong with her. Even in those days, it seems, the doctor was her refuge; at least so we might gather from the saying:

A restless woman in the house
Adds ache to pain.

In spite of all this, the Sumerian preferred not to remain a bachelor, for as he put it:

Who has no wife, who has no child,
Has no joy in life.

As for the mother-in-law, she seems to have been far less difficult than her modern counterpart; at least, no Sumerian mother-in-law stories have as yet come to light. Her unenviable reputation seems to have fallen in ancient days upon the daughter-in-law. A Sumerian epigram, concerned with what is good and bad for a man, reads:

The desert canteen is a man's life,
The shoe is a man's eye,
The wife is a man's future,
The son is a man's refuge,
The daughter is a man's salvation,
The daughter-in-law is a man's devil.

Friendship was, of course, highly valued. But as with ourselves, "blood was thicker than water," or, as they put it:

Friendship lasts a day,
Kinship endures forever.

The need for diligence has, no doubt, been preached in all places and at all times. But even "Poor Richard" could hardly have put it better than the Sumerian:

Hand and hand, a man's house is built;
Stomach and stomach, a man's house is destroyed.

At least some Sumerians tried hard to "keep up with the Joneses." For them, this drastic warning was coined:

Who builds like a lord, lives like a slave;
Who builds like a slave, lives like a lord.

With respect to war and peace, our ancients found themselves in the same dilemma that confronts us. On the one hand, preparedness seems to be necessary for self-preservation, or, as they said:

The state weak in armaments—
The enemy will not be driven from its gates.

On the other hand, the futility of war and its "tit-for-tat" character were only too obvious:

You go and carry off the enemy's land;
The enemy comes and carries off your land.

But war or peace, the thing to do is to "keep your eye on the ball" and not be fooled by appearances, for as our Sumerian put it, in words not untimely:

You can have a lord, you can have a king,
But the man to fear is the tax collector!

ADDITIONAL READING

Edward Chiera. *They Wrote on Clay*. Chicago, 1938.

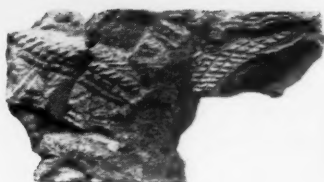
Samuel N. Kramer. *Sumerian Mythology*. Philadelphia, 1944.

Frankfort, Wilson, Jacobsen, and Irwin. *The Intellectual Adventure of Ancient Man*. Chicago, 1946.

James B. Pritchard. *Ancient Near Eastern Texts Relating to the Old Testament*. Princeton, 1950.



Narrow ivory plaques showing couchant sphinxes (actual size). From the House of Sphinxes.



IVORY CARVINGS FROM MYCENAE

By ALAN J. B. WACE

Director of Excavations

AT MYCENAE, on the east side of the modern high road a little distance south of the beehive tomb known to archaeologists as "The Tomb of Clytemnestra," lies a group of three houses. Our main attention during 1953 was devoted to their exploration. This row of houses was discovered in 1950 and two years later the middle house, which we called the House of the Oil Merchant, was excavated. In that house among other discoveries was found a number of clay tablets inscribed in the Linear B Mycenaean Script, the first to be found in an excavation at Mycenae and the first

General view of the house area seen from the citadel of Mycenae.



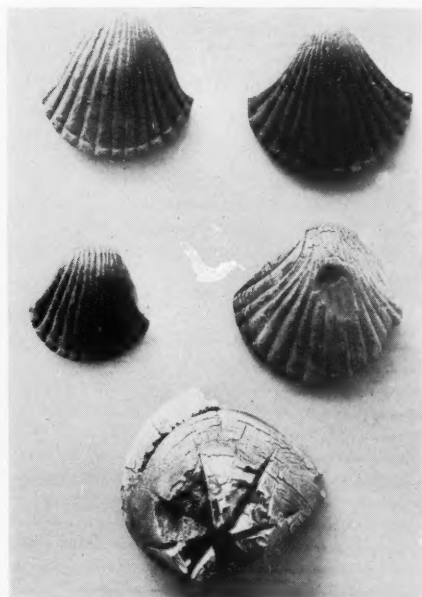
found anywhere in a purely private house. In 1952 tests by the side of this house showed that other houses lay to the north and to the south, and these we accordingly began to excavate in 1953. [For the 1952 campaign at Mycenae see Professor Wace's report in *ARCHAEOLOGY* 6 (1953) 75-81.—Ed.]

The northern house, now called the House of Shields, stands on a platform supported by a heavy Cyclopean terrace wall on its south and east. To the west and north it rests on the sloping hillside. Between it and the House of the Oil Merchant runs a narrow lane about two meters wide. The house to the south, now called the House of Sphinxes, is a basement house like the House of the Oil Merchant. On the north it abuts on the House of the Oil Merchant and on the east it was supported by a stout terrace wall. The floor of the basement lies directly on the rock and the main story of the house was built above the basement on a level with a terrace on the rising hill to the west. The basement was full of burnt debris, over two meters deep, which had

collapsed into it when the house was destroyed by fire. In the House of Shields fire had caused the upper story to fall into the rooms on the platform. Here the deposit was shallow, seldom more than fifty centimeters deep above the level of the ground floor rooms. The path for tourists visiting the "Tomb of Clytemnestra" for many years ran over the ruins of this house and it had to be diverted to allow us to excavate.

In clearing the ruins of the fallen upper stories of both these houses we found a remarkable number of carved ivories. None of these was *in situ*. All were in fallen debris and showed traces of fire. Many of them are now completely blackened, as black as ebony. It is perhaps possible that this extreme blackness is due to their having been originally stained or colored like the ivories which Homer mentions as being stained by a Maeonian or a Carian woman (*Iliad* iv, 142). One small piece hardly affected by fire does indeed show a touch of red-purple colour.

In all probability the ivories were used as inlays or plaques to decorate furniture, beds, chairs, tables per-



Cockle shells and an object resembling a hoof. Ivory models from the House of Sphinxes.

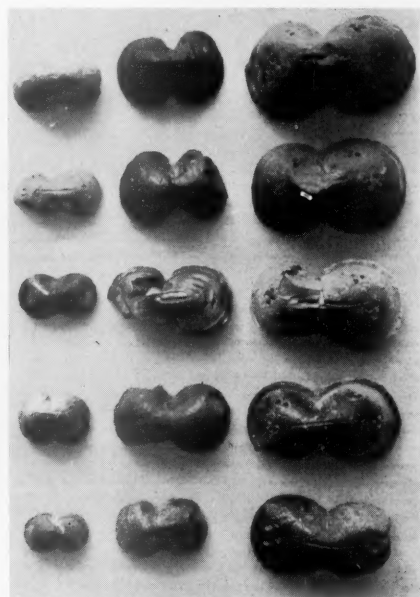
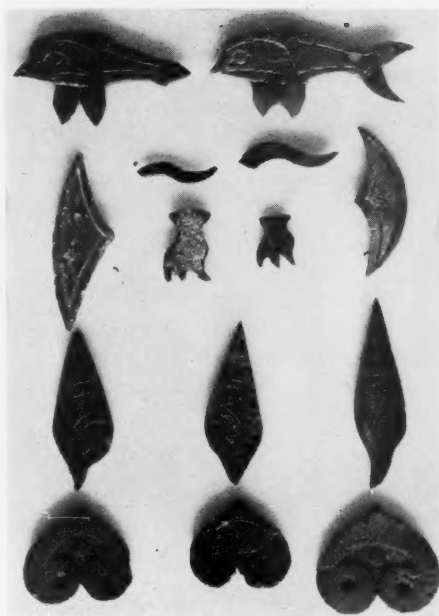


Figure-of-eight shields, applied as relief ornaments. Ivory models from the House of Shields.



IVORY CARVINGS FROM MYCENAE

continued



Ivory inlays [top, left] in various shapes—dolphins, shells, cusps, etc.—found in the House of Shields.

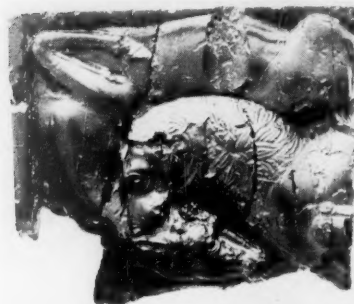
Confronted sphinxes [top, right], their forepaws resting on a column capital. Ivory plaque (actual size) probably a casket lid, from the House of Sphinxes.

Detail of ivory plaque [bottom] about 27½ inches long, with spiral and lotus pattern. From the House of Sphinxes.

haps, chests, and caskets. Homer refers to ivory as used for such purposes as well as on harness and weapons. Mycenaean furniture decorated with ivory would be the ancient parallel to the modern Near Eastern furniture inlaid with mother-of-pearl.

The carved ivories fall into several groups. One group consists of small pieces of ivory with shallow engravings of various well known Mycenaean decorative patterns. Among these are argonauts, murex and whorl shells, ivy leaves, lilies, dolphins, birds, cusps, spiral bands, heads of warriors with boar's tusk helmets. There are plaques and strips of ornament in low relief. Among these occur lions, sphinxes, the Mycenaean triglyph pattern, argonauts, the spiral and lotus pattern. There are some which are in high relief or else actual models, such as small model figure-of-eight shields or cockle shells of about natural size. Two ivories which can perhaps be placed in this class look like dominoes, one a "three" and the other a "four." In the House of Shields the model figure-of-eight shields were common, but in the House of Sphinxes only one was found. Dolphins occurred only in the House of Shields, and birds, sphinxes, and cockle shells only in the House of Sphinxes. These differences may be due to personal taste in the matter of furniture decoration.

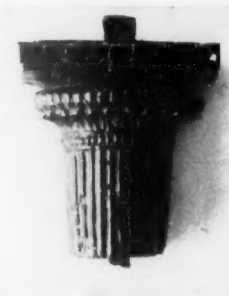
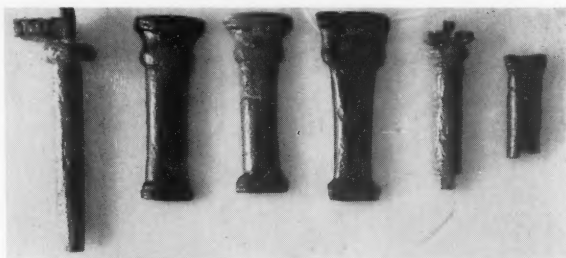
Lion pouncing on a calf. Ivory carving (actual size) from the House of Shields.



Fluted columns. Ivory models (actual size) from the House of Shields.



Unfluted columns. Ivory models from the House of Shields.



IVORY CARVINGS FROM MYCENAE

continued



Running lions. Ivory plaques (actual size) from the House of Shields.

From the House of Shields the lion plaques are the finest. There are pieces of at least three narrow plaques with running lions and one rectangular plaque showing a lion pouncing on a calf and seizing it by the neck. The running lions are drawn and carved with exceptional vigor and naturalism. The lion seizing its prey by the throat is a splendid example of the observation of nature and records with fidelity an instantaneous action. The artist's drawing of the lion and its prey is masterly and the composition follows a well known Mycenaean convention especially prominent on intaglios. The narrow plaques with running lions perhaps formed the sides of a casket and the lion and calf the lid.

The head of a warrior wearing a boar's tusk helmet shown almost fully in the round is an exceptional piece of solid ivory in almost perfect condition. It is superior to heads of this type found sixty years ago at Mycenae itself and at Spata. The details of the helmet are faithfully rendered and the warrior seen in full face gives a most realistic picture of a Mycenaean soldier. Homer knew helmets of this type and records that Meriones lent one to Odysseus. We can imagine from our head how a Homeric warrior wearing such a helmet would have appeared.

The model figure-of-eight shields must have been



Head of warrior wearing a boar's tusk helmet. Ivory carving (slightly under actual size) from the House of Shields.

IVORY CARVINGS FROM MYCENAE

continued

applied as high relief ornament to various objects. The different sizes could be explained if we imagine that they were applied to a tapering object like a sword scabbard and that the shields were arranged on it in a regular series of sizes. One plaque with a figure-of-eight shield in high relief with an ornamental border round it was perhaps for the lid of a casket. A narrow plaque in high relief with attachment holes at each end shows a row of four shields. This may have formed one side of the casket of which the other was the lid.

From the House of Sphinxes are pieces of at least four narrow plaques with couchant sphinxes which probably formed the sides of a casket. Of two plaques with the spiral and lotus pattern, one as restored from fragments seems to have been about 0.70 m. (27½ inches) long. It may have been inlaid in the side of a couch or table. It has holes for ivory pegs to fasten it to its background. Many ivory pegs for such use were found among the debris. The design, which is rendered with great sureness and delicacy, is well known from the ceiling of the side chamber of the beehive tomb at Orchomenos and from frescoes in the Palace at Mycenae. Another plaque shows parallel friezes of sailing argonauts, a vivid glimpse of marine life. The finest plaque, which may have formed the lid of a casket, is a superb piece with two sphinxes, perhaps male and female, in the attitude of the lions in the famous relief of the Lion Gate. They confront one another with their forepaws resting on the capital of a fluted column. Their hind legs rest on a plinth laid above three sets of the "Horns of Consecration." They wear elaborate necklaces and lily crowns with streaming plumes. The detail of the wings is finely drawn. The anatomy of their bodies and legs would be called realistic if sphinxes were not mythical animals. This plaque is outstanding both for its wonderful artistry and for the originality of the subject.

In both houses a great number of model columns in ivory was found. Some of the columns are in the round, but many are in relief and have ivory pegs which show clearly that they were intended to be fixed against a wooden or ivory background as though engaged columns. Some of them are plain columns of the same type as the column in the Lion Gate relief, with simple



Figure-of-eight shield. Ivory plaque from the House of Shields.

capitals and bases. In the round are the upper parts of fluted columns with twenty-six flutes and capitals similar in type to the "Pergamene" capitals of the Hellenistic age like those of the Stoa of Attalos at Athens. There are model columns with spiral ornament and there is one fragment of a model column carved in wood which displays the zigzag design of the columns of the Treasury of Atreus. One peculiar feature of many of the columns in the round is that the capitals often consist of two removable pieces, an echinus and an abacus. With these we can group a number of small rectangular blocks of ivory which are provided with tenons and sockets and like many of the model columns look as if they were intended for the construction of model buildings. They might almost have formed part of a child's building set.

There were also in both houses several examples in varying sizes of a peculiar object which resembles the foot of a cabriole leg. It is round but not symmetrical and suggests the hoof of a quadruped. It tapers smoothly upward from a flat base and at the top is sawn into eight thin tapering blades. At least four similar examples were discovered in the beehive tomb near Menidi. No others seem to have been found since and no explanation of their purpose has yet been forthcoming. The sawn blades look as if they were meant to fit into something else, but it is difficult to see what that

could have been. It would be hard to dovetail ivory into wood or metal because of its fragile nature. In any case a wooden or a metal foot for an object would be more practical and wear better than an ivory one. Perhaps future research and discoveries will elucidate this particular problem.

These ivory carvings are further evidence of the high standard of Mycenaean culture and also an indication of active foreign trade. The ivory presumably came from Syria where the elephant then still flourished in the Orontes valley and was probably brought by the immemorial trade route which ran from the Syrian coast, from centers such as Ras Shamra (Ugarit) via Cyprus, southern Asia Minor, Rhodes, Thera and Melos to Mycenae. The use of so much carved ivory to decorate furniture in private houses at Mycenae shows how much ivory was imported and that the citizens, nobles, and merchants of Mycenae must have been rich and prosperous. The actual carving of the ivory was almost certainly done at Mycenae, for the style and execution seem characteristically Mycenaean throughout.

In Archaic times the carved ivories from many sites

such as the Sanctuary of Artemis Orthia at Sparta show that the Greeks were then highly skilled in this art. Later in Classical times, in the fifth century B.C., when great artists produced large statues of the gods in ivory and gold, the Greeks again excelled in the use of the same material. So these Mycenaean ivories are the earliest examples we possess of a long Greek tradition, for we now know that the Mycenaeans were Greeks. Their culture is the earliest manifestation of the Greek artistic spirit which is one of the sources of modern western civilization.

The excavations were conducted with a research grant from the American Philosophical Society and contributions from the Universities of Cambridge and Oxford, the Bollingen Foundation, the British Academy, and the British School at Athens through which the excavation permit was granted. We received much kind cooperation from the Greek authorities, ably represented by Dr. Papademetriou, from the American School of Classical Studies, the Agora Excavations, and the Institute for Advanced Study in Princeton.

ANNIVERSARY ISSUE

The Winter Issue of ARCHAEOLOGY

will celebrate the Seventy-fifth Anniversary of the ARCHAEOLOGICAL INSTITUTE OF AMERICA. Special features include an editorial by the President of the Institute, a historical review of the Institute's founding and early development, and a detailed discussion of archaeology as a career.

In addition, there will be reports on excavations and research in Peru, Italy, Greece and Persia, as well as the fourth article of our museum series.

The Fifty-sixth Annual Meeting of

THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

in conjunction with

THE AMERICAN PHILOLOGICAL ASSOCIATION

will be held December 28-30, 1954

at the Sheraton-Plaza Hotel in Boston, Massachusetts

The program of this meeting will be mailed to all members of the Institute. Those who wish to present papers are requested to submit typewritten abstracts, up to 150 words in length, to the General Secretary, ARCHAEOLOGICAL INSTITUTE OF AMERICA, Andover Hall, Cambridge 38, Massachusetts, by October 15th.



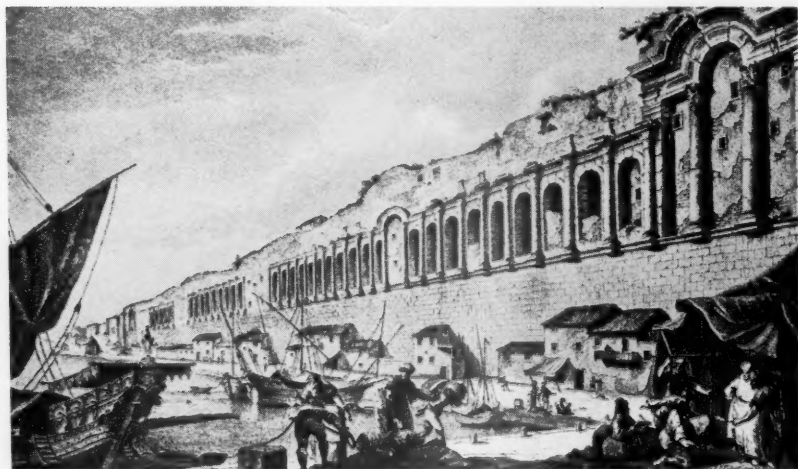
• A native of Zagreb, Yugoslavia, MICHAEL VELENDERICH studied medicine for some time in Italy, and was an officer in World War I. Always interested in antiquities, he has been a member of various museum boards since 1922, and is now expert for antiquities to the Administrative Court of Croatia. He has published articles on antiquities, medicine and astronomy in Yugoslav periodicals.

The Golden Gate of Diocletian's palace at Split. The surrounding ground has risen so that the entrance pavement is now about six feet below the modern level.

DIOCLETIAN'S PALACE AT SPLIT

A SUGGESTED RESTORATION

By Michael Velenderich



Diocletian's palace, as the cryptoporticus (facing the harbor) appeared in 1764. (Drawing by R. Adam)



The peristyle of Diocletian's palace as it appears today.

AT THE END of the third century of our era the Roman Emperor Diocletian, a native Dalmatian, built not far from the little fishing village Aspalatos, his birthplace, the most beautiful stone palace, partly a fortified military camp (*castrum*), partly a villa. This was to be his last refuge after his abdication in A.D. 305 and here he lived in retirement, growing flowers and vegetables around the palace. After Diocletian's death the palace served as sanctuary for various Roman emperors who had been expelled or who had fallen into disfavor.

Later, during the barbarian invasions, it served as a refuge for the people of the neighborhood, particularly for the citizens of Solin (*Salonae*), who adopted it as their permanent dwelling. They stayed on after the barbarians had left, and the building has continued to be occupied until the present time. The Split of today has grown around this palace.

Since those days the palace has suffered not only from the onslaughts of time and weather, which damaged it least, but also from attacks of various foes, Dalmatians and foreigners, as well as from the covetousness of the common people and of authorities preoccupied only with their momentary interests. The destruction of the palace went on because every one built, demolished and adapted according to his personal needs. Even great powers like Austria, Venice and France had

little concern for the preservation of this great historical monument, and what they did not themselves loot and carry away, they allowed individuals to take.

Many archaeologists and travelers have written in various languages, have discussed and contradicted each other as to who built the palace, what style it displays, what its purpose was. There are many sketches, plans, and models representing the original buildings. Damage has been done not only by looting but by rebuilding, adaptation and the addition of annexes, on the whole poor and ugly, without style and taste. These have done much to disfigure the aspect of the original building. Many parts of the basement have not yet been examined; during the past centuries much has been buried by natural disasters and has not been excavated. Thus, for instance, the principal entrance, the *Porta Aurea* or "Golden Gate" is still partly six feet under ground and so gives an incomplete and poor impression. Lately a law has been promulgated prohibiting any changes, but individuals still succeed in circumventing the law. Thus the palace today is studded with a series of tasteless adaptations which disfigure its beautiful sea front.

The cryptoporticus, or the covered gallery, along the whole southern front, with wonderful arches and loggias, has been walled up but for the little windows of the present dwellings. The interior of the palace has suffered even more. Only now and then parts of some

DIOCLETIAN'S PALACE AT SPLIT continued

beautiful capital or arch can be seen, while the rest is hidden by ugly alterations. The best preserved parts are the Emperor's Mausoleum and the little Temple, and even these have suffered alterations. In 1602 Archbishop Dominis had one wall of the Mausoleum pierced for the choir and a window. In 1616 Sforza Ponzoni had wooden pews put in and a vestry attached, which because of its style and irregularity disturbs the harmony. In 1770 Archbishop Ivan Luka Garaganin had the northern apse pierced to instal the chapel of St. Duje. Thus the northern part of the Peripteron became obstructed. The bell tower, though in pure mediaeval style, does not harmonize with the palace. Thus the palace stands today as an example of lack of understanding of a unique cultural and historical monument.

It is true that the complete restoration of the palace to its antique beauty is not an easy, cheap or short undertaking but it is possible and useful as we shall attempt to show.

Numerous sketches and projects for the restoration of the palace have been made. The most important are those of Adam (1764), Hébrard-Zeiller, Farlatti, and Niemann. The Dalmatian architect Vicko Andrić (1850)

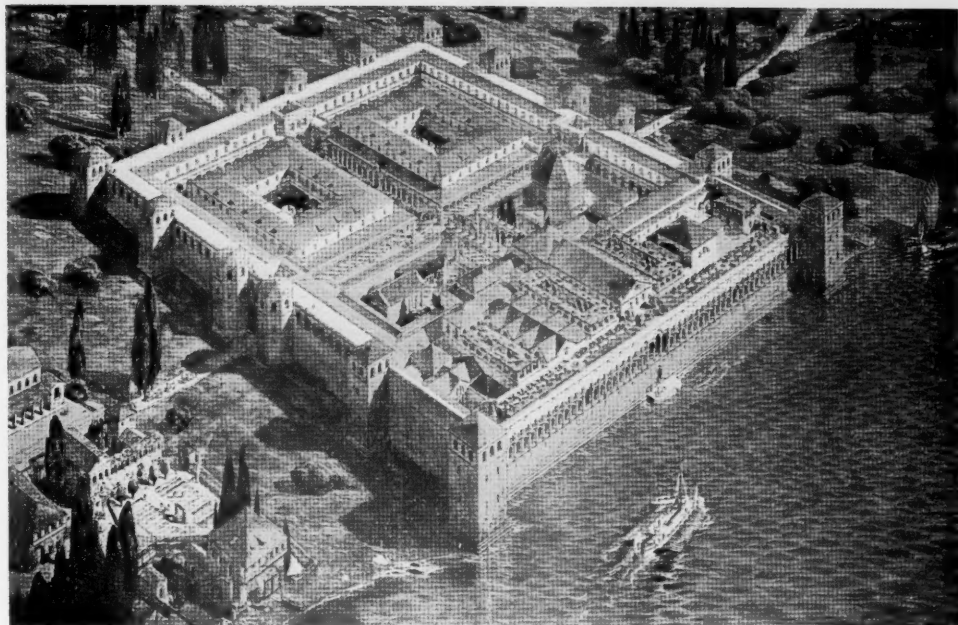
dealt with the project of restoration. He followed the plans prepared under the governorship of the French general Marmont at the beginning of the nineteenth century. Also during the Italian occupation of Dalmatia (1941-43) Mussolini's regime is known to have considered the restoration of the palace, but never undertook it.

Numerous little shops incongruously stuck on the outside and in the palace, now stand empty and are being demolished. For the three thousand inhabitants occupying dwellings in the palace, houses could be built outside and the same could be done to provide for the communal and state offices now housed in the palace. A permanent committee could be constituted, composed of experts in various fields. The required men and material we possess: the palace is of stone from the island of Brač and from Solin; the same material is still available. Modern building methods would make construction simple without harming the antique aspect of the restored palace.

The committee would have to make a thorough survey on the spot so as to determine what is still left of the original building, especially those parts not yet investigated, and to make a detailed plan for the complete

Diocletian's palace as it looks today. A view from the sea-front.





Diocletian's palace reconstructed. A drawing by Hébrard-Zeiller.

restoration using as far as possible the older plans, sketches, models and literature. The aim of the work should be the complete restoration of the palace in its original form and aspect, and in this form it would be a splendid building which would attract visitors from everywhere.

The work would have to start at the sea front. This must be stripped of all alterations and annexes, the cryptoporticus must be renovated, the arches and loggias cleared. The open corridor could be used for an open-air restaurant and cafe. The rectangular wall surrounding the palace would have to be rebuilt, including the ancient towers in it. These could house the necessary offices. The ancient gates and the inner streets connecting them would serve as access to and as main communications in the palace. The ancient baths would have to be rebuilt and could be supplied with fresh and sea water and the sulphuric mineral water from the well known thermal spa of Split. It is obvious how attractive such baths would be, a real Roman bath on a historical spot in a real imperial palace. The gates would be closed by an iron portcullis, which would give the gates the charm and air of antiquity. The restored lodgings of the imperial guests and high officers of the imperial household could be arranged as guest rooms.

The Triclinium, the imperial banqueting hall, could be used as a modern dining hall. The private imperial apartments could be arranged as a museum to house all the Roman objects excavated in the palace or in the neighborhood. In the palace much has never been excavated so that new finds can certainly be expected.

Originally the foundation of the south wall of the palace was built below sea level. The restoration might aim at recreating this aspect. For this, the part of the quay that now divides the palace from the sea would have to be removed and traffic diverted elsewhere. In ancient times the southern gate served as a navigable entrance to the palace and it could be used again in this way, so that gondolas and small motor-boats could enter the palace. The vast expanses of the building would offer room enough not only for restaurants, the hotel and museum, but also for shops selling souvenirs and handiwork typical of the region, as well as for a covered and an open-air theatre.

Already in the present limited conditions, open-air performances have been given, such as Shakespeare's "Coriolanus" and Ogrizović's "Emperor Diocletian." Both were very successful.

The restoration of Diocletian's palace, in addition to its cultural merits, is a sound financial proposition.



Fourth century B.C. sculpture in the National Museum, Athens. In the center is a grave monument.

• DR. ERNST LANGLOTZ is Professor of Archaeology at the University of Bonn, Germany, and he has previously held similar posts at the Universities of Jena and Frankfurt am Main. He is well known as the author of many important works on various phases of the archaeology of ancient Greece, especially vase-painting and sculpture.

Exhibition room in the National Museum, Athens, showing art of the fifth century B.C. At far end, center, is the famous grave stele of the lady Hegeso.



PHOTOGRAPHS COURTESY OF THE NATIONAL MUSEUM AT ATHENS

A view of the fourth century B.C. room. Sculptures from the Temple of Asklepios at Epidaurus.



THE NATIONAL MUSEUM AT ATHENS

ITS NEW ARRANGEMENT

By Ernst Langlotz

THE SALVAGING OF ART TREASURES and the occasional destruction of museum buildings have placed heavy burdens on museum directors of the Old World. Many hastened to re-establish the former arrangement; others thought of new possibilities to show their masterpieces more effectively. Only the National Museum in Athens is in the fortunate position—if such a statement is not misunderstood—of being obliged to fit out a newly completed modern structure. The Director and Ephor, Christos and Semni Karouzos, have solved this problem in an admirable way. A most significant step in museum history has been taken here in effecting an up-to-date arrangement whose purpose is exclusively the display of works of art.

All the large European collections of antiquities, whether in palaces (the Louvre), cloisters (the Terme Museum) or museums constructed solely for works of art (the Glyptothek) have divided their art treasures in the decorative fashion of the eighteenth century. Sculptures are arranged to embellish rooms of Baroque or classicizing style, as symmetrically distributed companion pieces, with artful vistas along corridors of statuary to focal points such as the



Venus of Arles or of Melos. In this way genuine sculpture is misused as decoration. If placed too close to a wall it depreciates plastically: an arrangement in running lines yields only a relief-like effect but cannot reveal its independent plastic force. By this old method of arrangement, the intrinsic plastic values of a figure become ineffective, above all because the original accents of light and shade are displaced by light from side windows. In comparison with Roman sculpture, Greek sculpture loses its visual impact. The statue-filled halls of the Vatican undoubtedly give adequate display to the Roman sculpture therein assembled.

This is not only unsuitable but ruinous for Greek sculpture. We need only ask how Greek sculpture was arranged in the ancient sanctuaries, at Delphi, at Olympia, and on the Acropolis. In no Greek sanctuary is there an axial or symmetrical arrangement or even a focal point. The new reconstruction of the Acropolis by Gorham Phillips Stevens makes this impressively clear. But the lack of all Baroque axial perspectives with their vanishing points is the consequence of the highly independent plastic feeling embodied in every Greek sculpture. Only a Greek statue isolated from a wall, without respect to any other work standing nearby, can reveal the plastic force residing within it.

For the first time the nature of Greek sculpture has received recognition in a museum. All symmetry is avoided in the arrangement of exhibits in the National Museum of Athens. Each statue stands free and may be viewed from all sides. The halls are airy and light and all walls are unobtrusive to avoid diminishing the plastic effect. The visitor to this museum is not distracted by the rhythm of rows of statues. He is, as it were, addressed by each figure and is led to circle it, to observe and understand its form. Looking at modern art all over the world today, we see city plans which show this principle of distributing space units. It is the most satisfactory way of arranging and observing works of art.

Against the pedantry of exhibiting everything possible the principle of showing only works of the highest quality is employed at Athens. Hence one now sees many familiar ancient statues as if for the first time. How kingly and powerful the youth of Melos stands before us since his back, freed from the supporting dowel, has parted company with the dark red corner of the old museum. Now for the first time are perceived his beauty of growth, his freedom of carriage, and the individual powers of his limbs. Those who have known this museum for many years are happy to see well known works not only in a new light but set up so that the sculptural quality of the work streams out more strongly than before. With very simple means the museum directorate has worked wonders and helped the statues actually to live again.

The brightness of the hall should approximate as far as possible that of the sacred precinct. Although the lighting system strives for as high an intensity as possible, it certainly cannot equal that of sunlight. The ancient rule of Phidias not to disturb accents of light and shadow by reflection from a floor that is too light is attained by the dark coloring of the floor.

But even today this "airy" arrangement may still surprise those to whom it seems right for an ambitious museum director to exhibit as much as possible. Precisely in the voluntary limitation followed at Athens lies the wisdom of the arrangement which exhibits a few well lighted works of art rather than many poorly lighted ones. Moreover, the rest of the material in the Athens museum will not remain in storage. It is the urgent desire of the museum directorate to fill with it halls which are still unfinished and to show visitors many of the unknown treasures as soon as possible.

Another reason that every plastically sensitive eye is pleased with the new arrangement of the museum is the care and preliminary preparation given each work before exhibition. Washing with pure water and subsequent bleaching in sunlight have restored the illuminating power of transparent Greek marble to many sculptures which had obtained a questionable patina from the hands of visitors. Supporting dowels in the back are replaced by inner doweling, as in the case of the Hermes of Praxiteles.

A new principle is also perceptible in this arrangement. The nineteenth century method of setting up stringently separated categories on the basis of historical development has been discarded. Even for laymen, on whom former museum directors have bestowed too little thought, it is highly instructive to see along with marble sculpture what was accomplished in ceramics and coroplastics during the same epoch. Along with the Stele of Aristion is shown the amphora with the puzzling, very ancient, stylized head of a horse in which the ashes of the warrior were protected until the grave was opened.

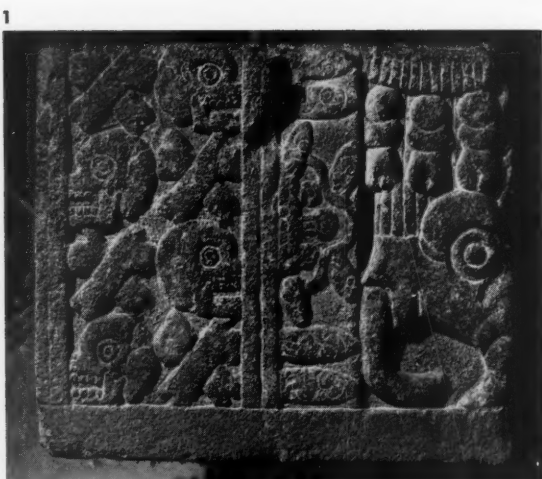
The first hall provides a completely new introduction to early Greek art, with newly prepared gigantic amphorae from the eighth century. In this free grouping they no longer function as jars, but as monumental graves not yet in human form, as expressions of monumental plastic feeling already extant in this early time. By adroitly placing Attic vases with *korai* (statues of maidens), white ground lekythoi with grave reliefs, and the best bronzes from Olympia and the Acropolis, each piece as well as the epoch from which it comes gains the color and diversification characteristic of Greek civilization during its great epochs.

But with this new principle of arranging only what is most significant artistically, the large stocks of vases, bronzes and terra cottas only now are awakened as if to a new life, after having been hidden from view in graves or in shrines of antiquity. When restored again to the light, they reveal to the receptive onlooker a new radiant power. On the first floor the great hall with Geometric vases is just completed. This too is distinguished from older collections of vases, thanks to the hand that has lovingly arranged it. The greatness of the art of this early time, the abundance of its possibilities in individual Greek states, and not last the exquisite beauty and inner greatness of form in Attic Geometric pottery, can now be appreciated for the first time, and we must agree with Semni Karouzou that this Geometric art of Attica must be designated as the first Classical art.

• A native of California, H. B. NICHOLSON studied at the University of California at Berkeley, receiving the A.B. degree in anthropology (1949) after military service in Europe and the Philippines. At present he is Thaw Fellow at Harvard University, doing graduate work in anthropology. Although Mr. Nicholson's major field of interest is Mexico, he has also worked in Alaska with the Peabody Museum of Harvard University expedition (1953), and was scheduled to excavate in Puerto Rico during the summer of 1954 with a joint expedition of the Peabody Museum and the University of Puerto Rico.

THE BIRTH OF THE SMOKING MIRROR

By H. B. Nicholson



THE SUBSOIL of modern Mexico City, the spongy tomb that seals in the broken ruins of ancient Tenochtitlan, has yielded a remarkable number of impressive Aztec sculptured monuments, usually accidentally discovered while making repairs and excavations. The careful analysis of the symbolic carvings on these fascinating stones, nearly all of which originally enhanced the numerous religious structures of the Great Temple, has shed substantial light on Aztec supernaturalism and the mechanism of the calendar. In contrast to many of the sixteenth century Spanish sources describing the native culture, into which occasional Christian influences have manifestly crept, the ideas conveyed by the symbols on these pre-Conquest pieces can be relied upon as authentically aboriginal.

Here we shall consider two such monuments (Figures 1 and 2) which were first unearthed in 1897 while demolishing an old colonial building which stood near the southwest corner of the Zócalo, the great central plaza of the city. Seven years after their discovery, they were briefly commented upon by the leading Mexicanist of the period, Eduard Seler (*Gesammelte Abhandlungen zur Amerikanischen Sprach- und Alterthumskunde*, Berlin, 1902-23, Vol. 2, page 834), but not illustrated, a lack remedied six years later in a work by the Mexican scholar, Antonio Peñafiel (*Destrucción del Templo Mayor de México antiguo*, Mexico, 1910, plate 84). Peñafiel's photographs, however, do not reveal quite enough detail to enable one



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accurately to interpret the most interesting feature of one of the stones, and his book is not easily available today.

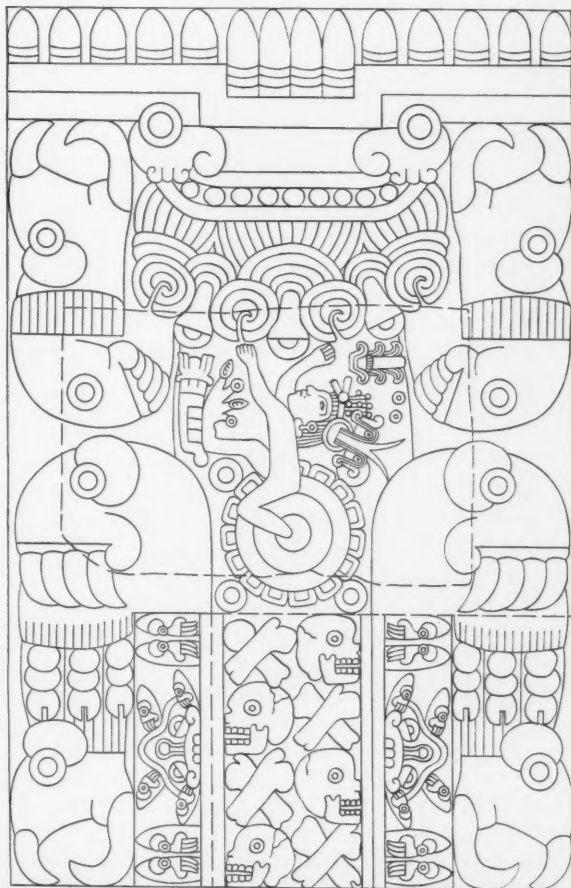
Not long ago I had the opportunity of examining both pieces when on exhibition in the old Salon de los Monolitos of the Museo Nacional de Antropología. The unique character of one of the carvings immediately aroused my interest. I soon discovered that neither Seler nor Peñafiel seems to have recognized that both carvings are fragments (cut artificially into sections in colonial times) of the same monument. A similar monument (Figure 3), discovered years later during construction of the Hotel Majestic a block to the north, and today also in the Museo Nacional, provided the clue which made possible the reconstruction of the stone as it had been originally set up. Using this second monolith as a guide, the reconstruction of the basic configuration of our example was not difficult, although certain of the details, particularly in the upper portion, are somewhat hypothetical.

The entire carving reconstituted (Figure 4), the two preserved stones take on an entirely new aspect. They are now revealed as only sections, though very important ones, of a large representation of a kind of grotesque monster. Similar monster figures are quite common in Aztec religious sculpture and are most often found on the undersides of an extensive series of objects: stone boxes, *cuanabxicallis* (vases for human hearts), idols, etc.

1. Section of monument with "loincloth" and claw of earth monster.
2. Section of monument with central section of carving: Tezcatlipoca emerging from *chalchibuitl* symbol.
3. Hotel Majestic monument with carving of earth monster.
4. Hypothetical reconstruction of the monument. Preserved sections circumscribed by dotted lines.

Figures 1, 2, 3, and 6 were obtained through the kindness of the staff of the Museo Nacional de Antropología in Mexico City, to whom grateful acknowledgment is made.

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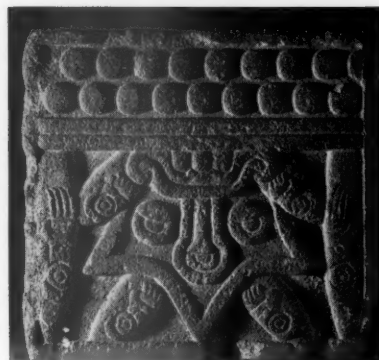




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Their exact significance was apparently first clearly enunciated by Seler, who identified them as representations of the earth god, Tlaltecutli, in the guise of a great monster-toad, an identification amply supported by the best evidence (Figure 5). A descriptive analysis and tentative interpretation of the reconstructed monument follows:

The monster is represented with outstretched arms and legs in a position similar to that assumed by the native women during parturition, called *mamazoubticac*, logically connected with the conceptualization of the earth as the great womb of life, the progenitress of all mankind. The upper section of the design is taken up with the broad gaping mouth studded with large teeth, suitable to the earth as the voracious swallower of the dead. The eyes are bordered by elaborate crenellated eyebrows, and below a decorative band connecting them is the tousled "night-hair" from which depend three pendunculate star-eyes. This peculiar hair style is a diagnostic of the deities related to death and the underworld and suggests the confused murkiness of night and the darkness of death, when the ever-waiting yawning jaws of "the father and mother of us all" receive their prey. On the Hotel Majestic monument,



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5. Tlaltecutli, Lord of the Earth. *Codex Telleriano-Remensis*, folio 20, recto.

6. Stone cube with celestial band device on sides (Museo Nacional de México, *Catalogue* no. 24-4).

between the upper lip band and the two upper claws, is a decorative element symbolizing *chalchibuitl*, jade. In our reconstruction this element was omitted because of exigencies of space.

Both the upper and lower claws assume a facial aspect, with a bold eye and eyebrow element placed at the base of each foreclaw. Striated cuffs, probably intended to represent leather, from which hang three stylized bells, are worn at the ankle and wrist positions. These leather cuffs are most often present on deities connected in Aztec cosmology with the West, including certain variants of the earth goddess. At the elbows and knees are the usual "demon faces," composed of eye, eyebrow, and fangs.

The large rectangular element between the legs apparently represents a kind of broad loincloth or skirt divided into three distinct fields. The central field is decorated with four descending pairs of skulls and crossed bones. The two lateral fields, which must be viewed horizontally, represent the well known "celestial band," symbolizing the heavens. It is composed of two narrow plain strips above a highly conventionalized representation of the Itzpapalotl, "obsidian butterfly," where this insect-goddess, symbol here

7. Date 1. Tecpatl, One Stone Knife, with smoking mirror and *atl-tlachinolli* symbol. From the "Teocalli of the Sacred War" or "National Stone." (After Palacios)
8. Tezcatlipoca drawing blood from his ear. Carving on the bottom of the cavity which served as a receptacle for human hearts on the back of the colossal *tlacuil-xicalli* in the Museo Nacional.
9. Tezcatlipoca. *Codex Telleriano-Remensis*, folio 3, verso. (After Selser)



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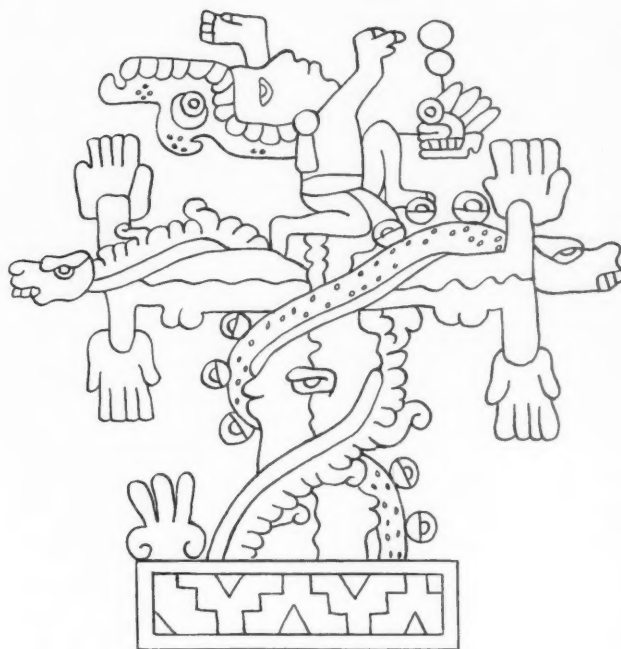
of flame and radiance, figures as the familiar sign for the planet Venus or bright star generally. It is flanked in turn by two pairs of stone knives with the usual demon faces, perhaps symbolizing rays of starlight (Figure 6).

Again the importance of night symbolism associated with the earth, the fearsome region of darkness and death, is evident. As far as I am aware, these are the only two sculptural representations of Tlaltecuitli yet discovered which display this skirt element with lateral celestial bands, although the skull-and-crossbones motif is not uncommon. The skirts of the earth-death goddesses in the most elaborate of the ritualistic pictorial manuscripts of ancient Central Mexico, the *Codex Borgia*, on the other hand, are often decorated with variations of the celestial band device as well as the Aztec predecessor of the pirate emblem.

The most interesting section of the carving is the central scene. It consists, first, of the circular symbol for *chalchibuitl*, jade, a substance which in the Aztec mind expressed the very quintessence of preciousness, its green color doubtless associated with the lush verdure of the ever-desired fruitful earth. The basic idea intended here seems to be that of the heart, or center, of



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the earth, for the *chalchibuitl* symbol was regularly employed to indicate in a figurative sense anything especially precious, and there was nothing more precious in the Aztec world view than the human heart, the very sustenance of the gods. For example, a jade jewel was commonly placed in the mouth of the corpse to serve it as a "heart"; on many Aztec stone idols a small cavity was left in the chest in order that a small jade plug could be inserted to indicate the vital organ; and these are cases in the pictorial manuscripts, the codices, where the *chalchibuitl* and heart symbols are intimately associated or even used interchangeably.

The pendant device on the *chalchibuitl* element of the Hotel Majestic monument is lacking here but a highly interesting and unique feature has been added: a nude human figure springing upwards from the center of the symbol. Three features clearly identify this figure as Tezcatlipoca, "smoking mirror," the omnipotent god of sorcery and the night who stood at the head of the pantheon of most of the peoples of Central Mexico at the time of the Conquest. The first feature is the diagnostic smoking mirror device itself worn at the

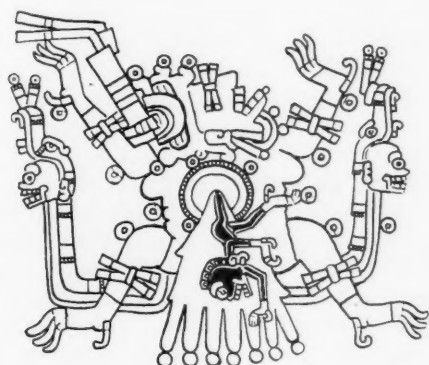
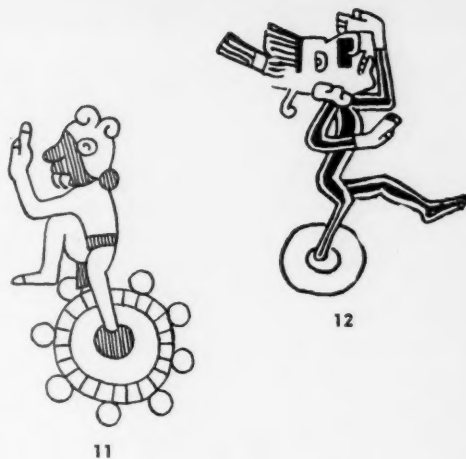
back part of the head (Figure 7); the second, the distinctive headdress (bound with a leather fillet) whose surface is covered with circles, that is, eyes, the eyes of night, the stars (Figure 8); and, lastly, the sign for the date 2. Acatl, Two Reed, above the head.

Replacing the right foot of the god is a somewhat defaced design which is nevertheless recognizable as the symbol for war, or perhaps more specifically, as the Mexican scholar Dr. Alfonso Caso has stressed, the Sacred War, the never-ending conflict whose motive was the capture of men whose hearts must feed the sun without whose life-giving rays all mankind would perish. It consists of the familiar symbol for water, *atl*, combined with a strip-like device representing burnt fields and ending in the symbol for flame; thus: *atl-tlachinolli*, water and burnt fields, or fire, the metaphor used in the early texts for war.

In this place a smoking mirror, pictorializing the god's name, is usually found instead of the *atl-tlachinolli* sign, but Figure 8 illustrates another Tezcatlipoca figure in which at least the second element of this latter symbol appears together with the mirror device

replacing the foot. Even more significant are the Tezcatlipoca figures in the twin post-Conquest interpretative codices which are based on a lost prototype, *Telleriano-Remensis* (fol. 3, verso) and *Vaticanus A* (fol. 44, verso), both of which display the conventionalized mirror from which issue in each case the symbols for flame and water, together with a serpent's head (Figure 9). The Spanish interpreter of the first manuscript has written near another smoking mirror on the god's temple a phrase *teotl tlachinolli* which may be translated as signifying burning of fire and water, and near the enumerated symbols at the foot position: "serpent, serpent's foot, and water and burning." It is clear from these explicit statements that the smoking mirror and the *atl-tlachinolli* symbols, like those for heart and jade, were practically interchangeable. Seler remarked on this interesting example of symbol fusion and also emphasized in this connection Tezcatlipoca's close association with cult ideas revolving around war. One of his numerous appellations was "Yaotl," enemy, and he was the patron of the *telpochealli*, the school where the common youth of Tenochtitlan were trained for the incessant wars to which they would invariably devote much of their lives. The position of the *atl-tlachinolli* symbol at this place instead of the more common smoking mirror, therefore, is simply explained by their virtual ideological identity in this context.

The date 2. Acatl is also of considerable interest, for this was the particular year in which the great New Fire ceremony was held to celebrate the *toxiuhmolpia*,



the tying of the years, at the completion of the fifty-two year calendric cycle. Together with 1. Miquiztli, One Death, it was a date closely associated with Tezcatlipoca, and one of his protean forms bears the name, Omacatl, a contraction of the date. According to the native informants of our best source on Aztec culture, the Spanish friar Bernardino de Sahagún, Omacatl was a god of feasting and revelry; in his enumeration of the buildings within the Great Temple area of Tenochtitlan the good monk lists at least five structures associated with the worship of this variant of the Aztec Zeus.

10. Birth or emergence of Mixtec tribal ancestor from tree. *Codex Selden*, page 2.
11. Little fantastic figure emerging from *chalchibuitl* symbol. *Codex Selden*, page 15.
12. Little naked figure, wearing emblems of Tezcatlipoca, emerging from circular device (on head of variant of earth monster). *Codex Borgia*, sheet 32. (After Seler)
13. Little demon figure emerging from *chalchibuitl* symbol on abdomen of variant of earth monster. *Codex Borgia*, sheet 31. (After Seler)

THE BIRTH OF THE SMOKING MIRROR CONTINUED

Many Aztec gods, in addition to their proper names, usually adjectival, also bore calendric names. These latter, as in the case of the national war god, Huitzilopochtli (1. Tecpatl, One Stone Knife), often referred to the date of the deity's supposed birth, for a common custom throughout ancient Mesoamerica was the naming of the child from the day on which it was born in the *tonalpohualli*, the 260-day divinatory cycle. Since the god on our carving appears springing or emerging naked from the *chalchibuitl* symbol on the abdomen of the earth monster, the most obvious interpretation of this scene would seem to be one of birth or genesis from out of the heart of the earth on the date 2. Acatl.

This explanation is supported by numerous conceptually similar representations in the various Mixtec mythico-historical pictorial annals, notably the codices *Nuttall*, *Vienna*, *Selden*, and *Sanchez Solis*. These illustrate the myths recorded in certain colonial sources telling of the origin of the Mixtec gods, demi-gods, and tribal ancestors from out of stones, trees, and the earth (Figure 10). Furthermore, on sheets 29-47 of the *Codex Borgia* are a number of scenes in which little naked figures, in various guises and wearing various symbols, including those of Tezcatlipoca, are leaping forth from smoke, jaws of fantastic animals, *chalchibuitl* symbols, etc., all again illustrating the same concept of birth or emergence. The representation of sheet 31, illustrated in Figure 13, is particularly close pictorially and ideologically to the one on our monument. Apparently this is the first representation of this scene in the classic Valley of Mexico Aztec style (the *Codex Borgia* is in Cholulteca style) and serves to demonstrate the fundamental unity of religious conceptualism and art throughout Central Mexico in the years just preceding the Conquest.

I am aware of no myth which has been preserved in which Tezcatlipoca is explicitly stated to have emerged out of the earth on the date Two Reed, but his intimate association with this element, particularly in his guise as Tepeyollotl (whose name translates "heart of the earth" and who seems to have been an old southern Mexican cave-earth deity), is well established. The myth which perhaps comes the closest to providing the background for the scene on our monument is found in the *Histoire du Mexique*, a sixteenth century French translation of a portion of a Spanish account of the history and mythology of the natives of Central Mexico at the time of the Conquest; there is evidence that it was authored by an important predecessor of Sahagún in investigating aboriginal customs and beliefs, Fray

Andrés de Olmos. In this myth it is related that after the final creation of the earth by Tezcatlipoca and Ehecatl, a variant of the famous plumed serpent god, Quetzalcoatl, the former entered the mouth of Tlaltecuitli ("who is the earth, according to some masculine, according to others, feminine") and met his companion Ehecatl, who had entered through the navel, in the heart of the "goddess" ("which is the middle point of the earth"). There they proceeded to form the sky, the rest of the gods assisting them in raising it. Although here we have Tezcatlipoca entering the heart of the earth deity rather than emerging from it, it is certainly conceptually very close.

Another mythical incident which may be relevant is found in the *Historia de los Mexicanos por sus Pinturas*, a very early anonymous Spanish account of Aztec history. Here it is told that in the year 2. Acatl, Tezcatlipoca, who had previously participated in the creation, changed his name to Mixcoatl, "cloud serpent," the Chichimec hunting-war god and was the first to make fire with the fire sticks in order to prepare a feast for the rest of the gods. Although a transformation rather than an actual birth is involved here, the incident is significant. Lastly, the famed "Apostle of the Indies," Bartolomé de las Casas, in his *Apologética Historia de las Indias* repeats a myth of the natives of Tezcucó in which Tezcatlipoca casts himself alive into the crater of Popocatepetl, the Smoking Mountain, thus giving it its name. As in our first case, this is "emergence from the earth in reverse," but again conceptually seems not too distant.

To summarize briefly, we have here two fragments of a large sculptured monument representing Tlaltecuitli, the toad-like earth monster god whose abdomen is decorated with the symbol for jade, thus heart, from which a naked figure of the god Tezcatlipoca is emerging, apparently referring to a lost myth in which this deity is born from out of the heart of the earth on the date 2. Acatl, Two Reed. This interpretation, though offered tentatively and with full recognition of the possibility that further research may substantially modify it, seems justified by the evidence just presented. Finally, it is hoped that this study has provided some indication of the light a careful analysis of these symbolically decorated monuments can throw on Aztec religion and mythology, as well as illustrating to what degree hieratic iconography had been developed and systematized in the vanished gods-intoxicated cultures of pre-Hispanic Mexico.

• The discoveries which LOUIS M. STUMER, who directed the work, describes here were made, like those at Playa Grande (reported in *ARCHAEOLOGY* 6 [1953] 42-48), under the auspices of Yale University, assisted by a grant from the Wenner-Gren Foundation. Professor Richard P. Schaedel, of Yale University, collaborated in the work at Cerro Culebra. The excavations at that important site will be discussed by Mr. Stumer in the second part of his article, to appear in our Winter issue.

Part 1:

THE CHILLÓN VALLEY OF PERU

Excavation and Reconnaissance 1952-1953

By *Louis M. Stumer*



SINCE IT IS EASY to become confused by the many terms for epochs and cultures in general use among Peruvianists, this account of excavation and reconnaissance in a single Peruvian valley will be prefaced with a short exposition of these terms and the culture periods to which they refer.

The coastal archaeology of Peru divides naturally into three main regions, North Coast, Central Coast and South Coast. The North Coast region runs from the Ecuadorean frontier to and including the Huarmey valley some 250 kilometers north of Lima. The Central Coast, of which the Chillón valley is a part, begins at the Fortaleza valley on the north (the Fortaleza is directly south of the Huarmey) and ends with the Cañete valley 160 kilometers south of Lima. The South Coast region begins with the Chincha, the next valley south of the Cañete, and ends at Tacna on the Chilean border. These three regions are separated from one another by unusually large strips of desert between river valleys, a geographical division which also is reflected in cultural development. In other words, the separation of the Peruvian coast into three parts is not arbitrary but has been forced upon us by the prehistoric culture pattern itself.

Within this geographical framework the pre-Conquest coastal civilizations of Peru sometimes developed independently of one another, sometimes were united partially by outside religious or military influences, and finally were consolidated in the great Inca Empire, itself overthrown by the Spanish conquest of 1532.

Leaving out the primitive and single-valley pre-ceramic epochs (generally referred to as Pre-Agricultural and Incipient Agriculture), the first great

cultural and stylistic manifestation is found at the beginning of the next epoch, the Formative. This is the culture of the famous highland site of Chavín de Huantar, called Chavinoid in its coastal phase. Chavinoid traits have a broad distribution along the coast but tend to vary rather widely regionally.

After the Chavinoid, cultural development appears to have been by individual valleys or groups of valleys for a considerable length of time. This era, embracing a good part of the Formative and all of the Regional Florescent epochs, was the most brilliant, artistically speaking, of the entire Peruvian prehistory. In this period occur, probably at least partially contemporaneously, such great art styles as Mochica in the North, Proto-Lima or Maranga in the Center, and Nazca in the South. In spite of evidence of inter-regional trade there is little or no stylistic blending. On the other hand, stylistic manifestations within a region tend to show their influence on one another.

Superseding the Regional Florescent epoch is the epoch of Great Fusion when related stylistic and cultural traits are again broadly distributed on the coast, transcending the three regional divisions. This is the epoch when the influence of Tiahuanaco is so widely diffused. In spite of the fine work done by the late Wendell C. Bennett in trying to resolve this problem, it is still not fully clear whether this influence came directly from Bolivian Tiahuanaco or was diffused from Peruvian centers in the highlands; hence these styles must bear for the present time the designation of Tiahuanacoid.

The Tiahuanacoid epoch may be divided roughly into three periods. Among the better known cultures of the first are Mochica-Wari in the North, Middle Ancón I in the Center, and Pacheco in the South. The second Tiahuanacoid period displays such styles as Wari-Lambayeque in the North, Middle Ancón II in the Center, and Nazca Y in the South. The third and last Tiahuanacoid period produces such styles as various aspects of the Cajamarca style on the North Coast, the Late Ancón I or Black-White-Red Geometric on the Central, and the earliest phases of the Chinchica or Ica on the South.

Following the epoch of Great Fusion is that of Kingdoms and Confederations, during which strong regional political entities reappeared on the coast. Noteworthy among these, with their attendant cultural manifestations and distinctive ceramic styles, are Chimú in the North, Chancay or Huaura in the Center, and Chinchica

or Ica in the South. This is followed by the Imperial epoch, when the Inca Empire absorbed or conquered not only all of coastal and highland Peru and Ecuador, but parts of Chile, Argentina, Bolivia and Colombia as well. During this period pure Inca ceramics are found all along the coast in association with strong Inca influence on the local cultures; these styles are called, for example, Inca-Chimu, Inca-Chancay, and Inca-Chinchica. With this epoch Peruvian prehistory comes to a close, abruptly terminated by Pizarro's conquest in 1532.

Dates have purposely been omitted from this summary as, in the absence of sufficient Radiocarbon 14 dates, they might be incorrect and misleading. However, Radiocarbon and other evidence tend to place part of the Chavinoid period around 1000 B.C. and part of the Mochica around the time of Christ.

The Chillón river valley is one of a group which make up the Central Coast region of Peru. It is a medium-sized member of this group and seems to have supported a normal population for its flow, though it was never large enough to be the focus of a valley-group culture, kingdom or confederation. It is the valley north of the Rimac, "the valley of Lima," and its mouth is located only some seven kilometers from the mouth of the Rimac. However, about eight kilometers inland the Chillón veers to the northeast while the Rimac keeps on in a generally east-west line, so that when the elevation of 1000 meters is reached there is considerable distance between the two. I mention especially the 1000-meter line as it roughly marks the boundary between coastal and highland cultures. Notwithstanding the proximity of the most fertile area of the Chillón to that of the Rimac, the former tends to be associated with the cultures focused in valleys to the north of it, while the Rimac's affinity seems to be for the valleys to the south. We have not yet been able to account archaeologically for a division at this point. There is not the slightest geographical reason for it although it is borne out, for the later periods at any rate, by several of the Chroniclers, those Spanish and Hispanicized Inca writers of the sixteenth and seventeenth centuries who set down accounts of Peruvian life and history before the Conquest.

The Chillón valley (See Map, Figure 1) contains important archaeological sites among which are, reading from the river mouth eastward, Marquez, Chuqui-

tanta, Zapallar, Collique, Huacoy, Chocas, Macas and Checta. Of these, only Marquez has been the object of published scientific excavation. Some work has been done at Zapallar, Collique and Chuquitanta, but it has either been amateur or has not yet appeared in print.

The project upon which I have been working for the past two years is first to determine the pre-Tiahuanacoid I culture sequence for the Central Coast and next the post-Tiahuanacoid I, while at the same time making as complete a survey as possible of every valley in which excavations are either made, planned, or contemplated. In this framework, it was decided in September of 1952 to excavate the Cerro Culebra site at the mouth of the Chillón, and also to sink several test pits at El Palmo cemetery nearby. These excavations were terminated in March 1953, and a partial reconnaissance of the remainder of the valley was made in September and October of the same year.

El Palmo proved to be the most dangerous digging that I have yet encountered in Peru. In fact, our head workman says that local gossip has it that this is one of the few places where it is possible to encounter vertical burials! By this he means the bodies of grave robbers caught in the cave-ins of their own excavations. Fortunately, we did not run across this type of interment. The reason for the danger at El Palmo is that the cemetery area is limited and therefore there are amazing numbers of intrusive graves. This constant disturbing of the soil has changed its natural consistency and the danger of a cave-in is ever present, necessitating either tremendous excavations or constant caution. Added to this is the practice of using 300 to 400-pound grave marker stones which tend to come cascading out of the sides of the cut at the first symptoms of a cave-in. At first, we tried to leave these in place for photographic purposes but after a few narrow escapes we soon changed our ways.

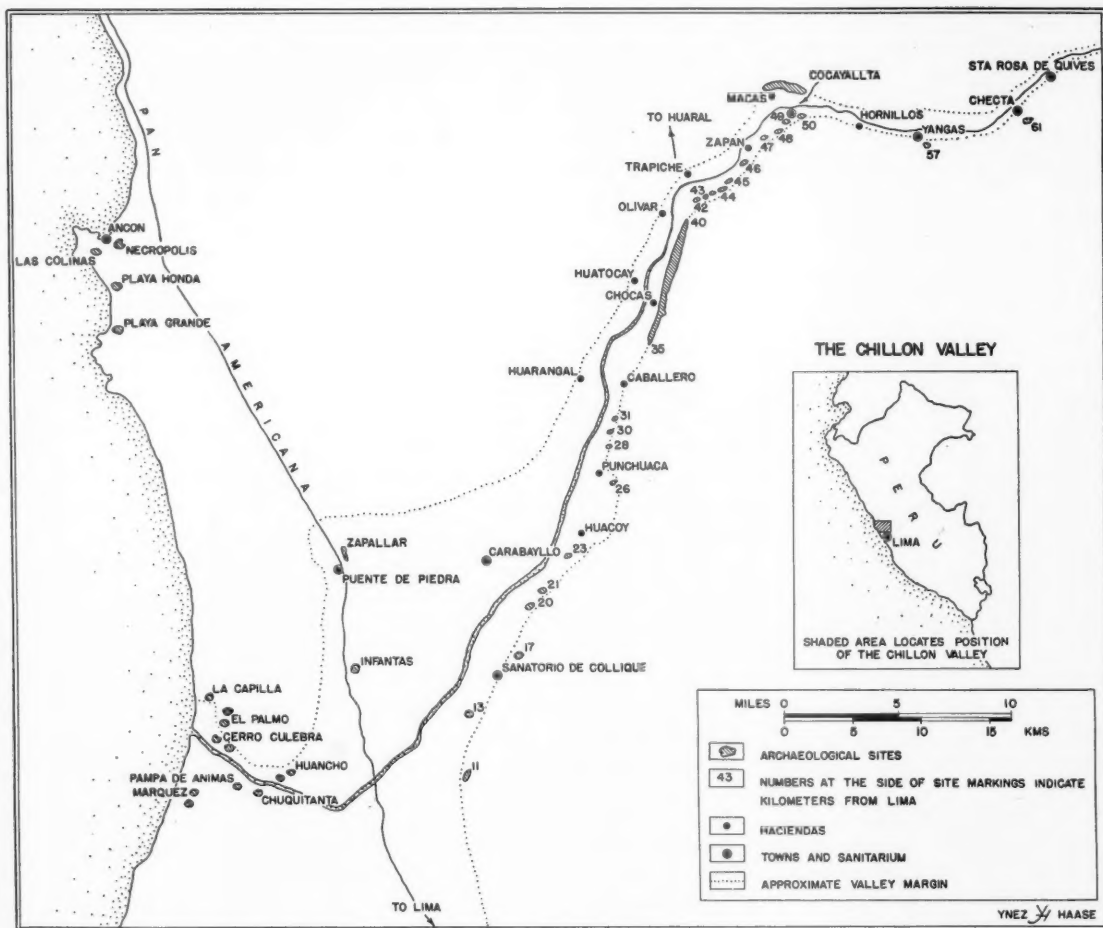
In spite of the presence of a few surface sherds which appeared to me to be a decadent version of the Playa Grande style (see *ARCHAEOLOGY* 6 [1953] 42-48), no tombs of this type were found. Nevertheless, the excavations proved fruitful in establishing beyond doubt the sequence for most of the epochs of Great Fusion and Kingdoms and Confederations. Because of the very factors that made for so much danger, we were fortunate enough to encounter in two instances superpositions of three tombs (Figure 2). Regrettably, only one could be photographed; the other collapsed as I was

about to click the shutter, with the workman just missing being buried alive while a fine Chancay vessel was popping out from above and breaking itself on his head. Fortunately the workman was unharmed and the pot was restorable! The burials at the lowest level (2.25—3.15 m.) proved to be early Tiahuanacoid II, those at the next level (1.25—1.50 m.) Tiahuanacoid III and the uppermost (0.50—0.75 m.) Chancay. The earliest tombs were well constructed shafts, either square or circular (Figures 3 and 4), and about half of them were lined with stone. In some the grave marker stone was mortised into the lining of the grave shaft. This practice is also found at the Teatino site some ninety kilometers to the north, where again it is combined with the same incised style of Tiahuanacoid ceramics as is found at El Palmo. So far El Palmo is the farthest south that this type of grave has been encountered and it has now been established for a considerable range, as it was found in early 1952 at Caldera in the Huaura valley some 120 kilometers north. It had already been found at Ancón and at Teatino in the territory between by Drs. Max Uhle and Julio Tello, respectively. The later Tiahuanacoid III and Chancay tombs were simpler in construction, merely sunk into the early grave fill.

In all, twenty-eight tombs were excavated at El Palmo. Of these, eight were of the Teatino type, eleven of the Tiahuanacoid III, and nine of the Chancay. Some further time was spent in trying to locate tombs of the Maranga and Tiahuanacoid I periods, but our search proved fruitless. Perhaps the true Tiahuanacoid I style is not to be found in the Marquez region and therefore, because of ample grave association at Ancón of Teatino pottery and other remains with Tiahuanacoid I, I have assumed this to be the case for the Chillón valley as well. This concluded our excavations at the mouth of the Chillón, and we turned to reconnaissance up valley. There is much, however, still to be done at the many sites near the river mouth, and it is to be hoped that further digging may be possible.

Some twenty-five sites were surveyed in the Chillón. Toward the mouth of the river, near the excavations, the most noteworthy sites are La Capilla, Chuquitanta, and Pampa de Animas (see Figure 1). La Capilla is a large cemetery which, unfortunately, has been thoroughly looted. However, it is easy to date from the

THE CHILLÓN VALLEY OF PERU CONTINUED





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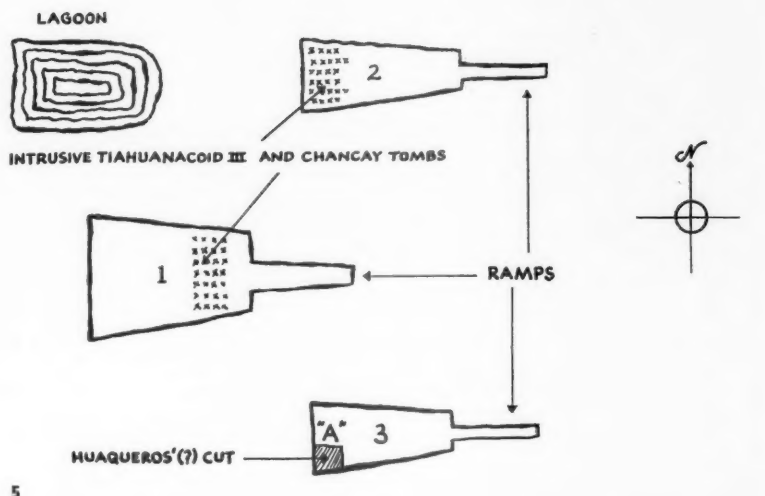
1. Map showing archaeological sites in the Chillón valley, Peru.

2. Superposition of three tombs at El Palmo cemetery, Marquez. The burial at the bottom is Tiahuanacoid/Teatino, the one above it is Tiahuanacoid III, and the superficial grave is Chancay. The very disturbed nature of the soil above the lowest tomb can plainly be seen.

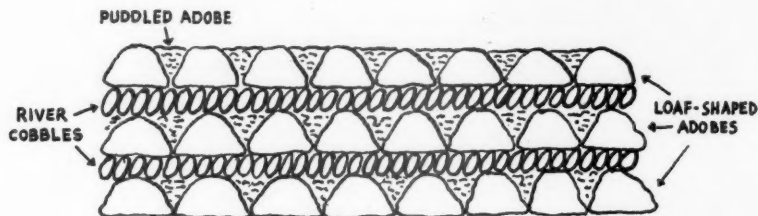
3. A Chancay grave at El Palmo, intrusive into a Tiahuanacoid/Teatino tomb. The beginning of the earlier stone-lined grave shaft can be seen in the foreground.

4. View of the grave shaft shown in Figure 3. The intrusive grave has now been cleared, and the cleaning of the lower burial is well under way. The condition of the bodies and textiles at this level is very poor, owing to water seepage.

5. Plan of the ceremonial site at Huacoy, showing the ramped pyramids with a lagoon nearby.
6. Detail of construction of a pyramid at Huacoy (Point "A" in Figure 5). Scale 1:20.
7. Detail of the architecture at Macas, showing the stone-and-clay and tapia construction and the curvature of the wall.
8. Tapia construction at Macas. Detail of the top of the wall showing stone tenons.
9. Three views of the petroglyphs at Checta. That at the left is a representation of the feline animal so prominent in all stages of Peruvian pre-history; the others are less easy to decipher.



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Figures 7, 8, 9 by Ynez Haase;
others by the author.

large amount of decorated sherds scattered about. It belongs mainly to the epoch of Kingdoms and Confederations, although apparently started toward the close of the epoch of Great Fusion. During our reconnaissance of La Capilla, we were fortunate enough to discover a pre-ceramic site some four hundred meters distant, overlooking the sea. It would seem, therefore, that this pleasant area of level fields surrounded by low hills has been constantly occupied from the dawn of Peruvian prehistory to the present time. Unfortunately, we were unable to discover a site of the Formative epoch, although it is my opinion that this may exist nearby where there are several low mounds or *huacas*. These are now planted to cotton and investigations must be deferred until after picking and before planting time.

The ruins of Chuquitanta are among the largest of stone construction on the Central Coast and appear to date from the early part of the epoch of Great Fusion, although the scarcity of sherds makes this identification uncertain. Actually, in surveying a large number of Central Coast sites, I have found that this very scarcity of surface sherds is an indication of Tiahuanacoid I occupation. These people seem to have been most tidy, unlike their predecessors and followers, but in such sites one's patience is usually rewarded by the eventual finding of a small cache of their unmistakable polychrome sherds. Here at Chuquitanta, the few sherds were utility ware of a type generally found in association with the Tiahuanacoid I polychrome. The ruins consist of two immense parallel stone constructions whose clay binder has completely disintegrated, leaving nothing but tremendous piles of uncut stones. However, examination of aerial photographs gives ample evidence of the complicated ground plans. At the

southern extremity of these ruins there must once have been a large pyramidal temple of the same stone and clay construction. The central courtyard is now planted to orange groves and artichokes, making it impossible to investigate.

Pampa de Animas consists of a large cemetery and a living area of wattle-and-daub houses, their walls showing plainly above the superficial wind-blown sand. It is dominated by two *tapia* (poured adobe) structures of unmistakable Incaic influence. This is borne out by the potsherds here encountered, which are, at their earliest, of the latest part of the epoch of Kingdoms and Confederations and date mainly from the Imperial epoch. Both Inca-Chancay and pure coastal Inca vessels are found in quantity, as well as a great number of amusing and original clay figurines. Nearby is the great aqueduct of Marquez-Chuquitanta, whose associated ceramic remnants date from the time of Kingdoms and Confederations. This has been called by some an "Inca causeway" but this is most doubtful as it faithfully follows the contours of the valley instead of running straight like most Inca structures of that type and leads nowhere except to the irrigated fields at the river's mouth. Doubtless the aqueduct was still in use in Incaic times and possibly in early colonial times as well, but if the Incas used it as a causeway they must have had some lemming blood and have engaged in periodic marches into the sea! Notwithstanding, it is a most impressive structure, the most imposing of its kind on the Central Coast.

Above the cluster of sites close to the sea, there is another group below the neck of the valley. The most important of these are Infantas, Zapallar, Collique and Huacoy. Infantas is a cluster of *huacas* surrounding a



central pyramidal mound which is honeycombed with burials ranging from Tiahuanacoid II to Inca. It is noteworthy because of the number and variety of the almost complete vessels encountered on the surface and also because of the amount of black ware showing Chimu influence from the North Coast. Zapallar is a most important settlement and cemetery of the Chancay civilization. It is very large and noted for the excellence and originality of its ceramics and other artifacts, including metals of various kinds. Collique is a fortified and terraced hilltop commanding the neck of the valley. It appears to date from the epoch of Great Fusion but may well have been occupied during that of Kingdoms and Confederations as well. Its purpose seems to have been mainly military and the extent and complexity of its fortifications well repay the climb necessary to inspect them. Huacoy is the most formal ceremonial site I have yet seen in the Chillón. The three ramped pyramids are arranged in a "U" shape (Figure 5) and there is a decorative lagoon behind them which is still in use for irrigation purposes. The construction is like no other known to me (Figure 6) and is most unusual for the region. There are many intrusive Tiahuanacoid III and Chancay burials in the tops of two of the *huacas* but the original construction appears to be much older. The only diagnostic sherd that I was able to find directly connected with the architecture is either Playa Grande or Maranga, which seems to be in keeping with the massive character of the structures. This site requires more investigation than we had time for. Such investigation is contemplated for the 1954-1955 season.

Among the many sites above the neck of the valley are several worthy of comment. The valley was investigated as far as Kilometer 65; at this point no further evidence of coastal cultures was to be found, all ruins being of the highland type. An unusual amount of Chancay penetration was found, ruins of this culture occurring as far up valley as Kilometer 46. It is interesting to note the prevalence of curved walls in the Chancay sites. They are similar to that shown in Figure 7, although the material used is invariably tapia and in the manner of many of the Chancay structures the construction is by no means massive. Another interesting feature of the Chancay sites up river is the use of local paste for the ceramics, although they retain pure Chancay forms and designs. The Chancay figurines, so prevalent in clay in the coastal settlements, also appear here in quantity but made of wood, which is

more plentiful than on the coast.

Cocayallta, near Kilometer 50, is the oldest site investigated in the upper portion of our survey. There are extensive living areas, a cemetery and a ceremonial pyramid. The construction is mainly of river cobbles, which is quite unusual. Sherds are plentiful and are mainly of the Maranga style. There is also a goodly quantity of the Tiahuanacoid I plain ware similar to that found at Chuquitanta. Perhaps this site may furnish evidence of the transition from the Regional Florescent epoch to that of Great Fusion, and for that reason further investigation and test digging is tentatively scheduled for the year 1955.

The other two important sites in the area are two large urban settlements, one near the Hacienda Caballero, which extends for nearly five kilometers east and west; the other another six kilometers farther up the valley. This second site has a rather elegant "annex" where ceramics of the Inca and associated local styles of the Imperial epoch are found in profusion. The purely urban portion is well planned, compact, and extremely well fortified, suggesting that it was an important strong point guarding the route which led to the highlands.

It would be impossible to close this account of the Chillón reconnaissance without mention of the Macas site on the north bank (Figures 7, 8) and also the many petroglyphs at Checta (Figure 9). Unfortunately, time was lacking for surface reconnaissance so that even a thumbnail description is impossible. Suffice it to say that merely from its size Macas would seem to have been an important settlement. Judging from its architecture, I would attribute it either to the epoch of Great Fusion or to that of Kingdoms and Confederations but positive identification must await future study. The petroglyphs at Checta also merit much more examination.

The concluding section of this article (to appear in the next issue of ARCHAEOLOGY) will take up our excavations at the Cerro Culebra site on the Hacienda Marquez. There we made extensive cuts, including cemetery areas, a house site of some elegance of the Playa Grande civilization, and the pyramid temple which is the salient feature of the site. Cerro Culebra temple produced the largest and best preserved wall paintings yet uncovered on the Central Coast, providing us with both rewarding excavation and provocative problems of cultural interrelationships in early Peruvian prehistory.



Vanity Box

Third Century B.C.

Photographs courtesy of the Museum of Fine Arts, Boston



THE WAYS OF WOMEN have remained remarkably unchanged over the centuries. Convincing proof of this is provided by the assortment of "beauty aids" shown above: a comb, sponge, perfume bottle, boxes for powder, rouge, and eye-shadow (kohl) and two bronze spatulas for mixing the cosmetics. It is reported that all were found in the handsome bronze cista, which was made in Italy in the third century B.C. This may or may not be true, but they do represent the kind of objects for which such boxes were made. Clearly the toilet articles reveal that the vanity of ancient woman was equal to that of any other age. Their very preservation, however, is the result of a belief not so characteristic of the present day, for they were placed in the tomb of the owner to comfort her in the after life.

Hazel Palmer

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The Stoa of Attalos,
showing its back wall
under reconstruction.



REBUILDING THE STOA OF ATTALOS

Progress Report: Spring 1954

By HOMER A. THOMPSON

Field Director, Agora Excavations

RAPID PROGRESS is being made on the rebuilding of the Stoa of Attalos II (159-138 B.C.) which is to serve as the permanent museum for the finds from the excavation of the Athenian Agora. [For a general account of the Stoa of Attalos and the project for its reconstruction see *ARCHAEOLOGY* 2 (1949) 124-130.] Work began in June 1953. At first much time was spent on the prosaic but vital tasks of draining and reinforcing the ancient foundations. Many hundreds of limestone blocks were quarried and cut to size through the fall and winter. These are now being laid and the great walls are rising day by day.

Particularly striking is the back wall of the Stoa which still stands to its original height of about fifty-one feet at the north end of the building. In the middle part where this wall had been largely dismantled it has been restored to floor level. A score of the most skilful stone masons of modern Greece are here matching their craftsmanship against that of their ancestors of 2100 years ago. In the height of the basement the coursing is emphasized by narrow set-backs and beveled joints and the face of the wall is enlivened by "lifting bosses," here left for purely aesthetic reasons. The restoration will permit one to appreciate as never before in Athens the beauty of Hellenistic masonry at its best.

The very thorough examination of the ancient foundations on which the modern engineers have insisted has meant the removal of virtually every vestige of ancient accumulation within the area of the Stoa. This in turn has brought to light many pre-Stoa remains: chamber tombs and graves of the Mycenaean and Protogeometric periods, wells of Geometric and Archaic date, and several public buildings.

Among the early buildings is one which consisted of a graveled courtyard bordered on the north side by a complex of rooms of various shapes and sizes. A lucky discovery, made at Thanksgiving time 1953, has permitted this building to be identified as a lawcourt, the first of its kind to be recognized with assurance in

Athens, or indeed in any of the ancient Greek cities. [Another building identified as a lawcourt was discussed in *ARCHAEOLOGY* 6 (1953) 142-143.] The discovery is particularly gratifying inasmuch as the building was in use in the late fifth and fourth centuries B.C., the heyday of Athenian forensic oratory; it was still in service when Aristotle, or one of his pupils, was composing the essay on the Constitution of Athens, in the concluding chapters of which is given a circumstantial account of how the contemporary Athenian lawcourt functioned. In view of the inordinately prominent part which legal proceedings played in both the public life and the literature of ancient Athens, the find is likely to be of wide interest.

One of the rooms of this early building complex lies deep beneath the north end of the Stoa. It is a modest room with clay floor and clay-plastered walls. Two terracotta troughs, obviously re-used water channels, were found set on end and firmly imbedded in the clay floor near one side of the room. Between the two tiles lay five wheel-shaped objects of bronze which may be certainly identified, from the inscriptions engraved on three of them, as official ballots (*psephos demosia*). With them was found a bronze ball of the size of a marble. A sixth ballot lay on the floor of the room just outside the tiles and two other ballots (not illustrated here) had been picked up within the same complex in 1952. Likewise in the same area had been found in 1952 a fragmentary bronze plate known from better preserved examples to have been an identification card (*pinax*) carried by a juror.

According to Aristotle, the juror came to the allotment place of his tribe with his identification card on which were inscribed his name, his district affiliation and a letter indicating to which of the ten sections of jurors he belonged. The card was put in an allotment machine and, if the owner was allotted to jury duty for the day, he drew from a hydria full of *balanoi* (presumably acorn-shaped bronze balls) one that was marked

with a letter indicating the courtroom to which he was assigned. After the case had been heard, each juror was given two ballots, one with solid hub for acquittal and one with hollow hub for condemnation. The ballot which the juror wished to count was then deposited by him in a bronze urn, the other dropped into an urn of wood. In each case the hub ends of the ballot were held between thumb and finger so that the vote might be recorded in secret. To insure that all of the jurors voted they were each given a token when they cast their ballots, and it was only by presenting the token that they would collect their pay for the day's jury duty.

The characteristic shape and the inscriptions on the ballots leave no question as to their identification. In addition to the inscription, some of the ballots are stamped with a single letter on the other side; others have a large letter cast in relief. These letters correspond to those on the identification cards and it may well be that they served as another check to ensure that jurors went to the courtroom to which they were assigned. Just as all the cards of the jurors allotted to a particular courtroom were sent there to be returned to the jurors, so a consignment of ballots with the same proportion of section letters as appeared on the identi-

cation cards may have been issued to the official in charge of that courtroom.

The identification of the bronze ball with Aristotle's acorn is not certain. The care with which it was forged suggests some serious purpose, and in size and shape it is close enough to a Greek acorn. This specimen, however, is not inscribed, though others found elsewhere in the Agora excavations do bear incised letters. Possibly the letters were in some cases inscribed in paint or ink, as in the case of certain bronze cubes which Aristotle says were given various colors. Or have we to do instead with one of the counters used in the allotment machine, though these were called by Aristotle cubes (*kyboi*)? Some uncertainty persists also with regard to the exact purpose of the upended water channels. They seem singularly ill-suited to have served in themselves as a container. Did they perhaps merely support a table top on which would have rested an urn of bronze or of wood?

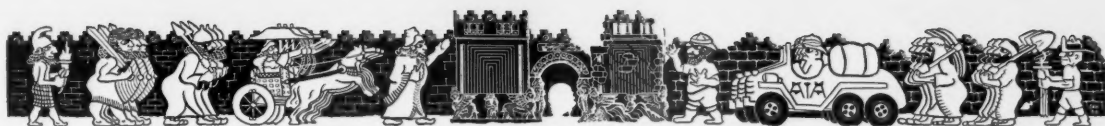
Despite these uncertainties, the new discovery, taken in conjunction with Aristotle's account, helps one to visualize the mechanical ingenuity with which the Athenians strove to overcome the perversities and frailties of human nature.



A room in an Athenian courthouse [left] showing a "ballot box" being examined by excavator Eugene Vanderpool.

Six ballots, a bronze ball and a dikast's name plate [below] found in the early lawcourt beneath the Stoa of Attalos.





ARCHAEOLOGICAL NEWS

Madrid Prehistoric Congress

(We owe the following brief report to the kindness of Mr. Robert B. K. Stevenson, Keeper of the National Museum of Antiquities of Scotland.)

The Fourth International Congress of Prehistoric and Protohistoric Sciences took place in Madrid, April 21-27, 1954. About 250 representatives of thirty countries, from Colombia to Japan, gathered together to read and hear papers, and to get to know one another. The overwhelming majority of the members came from the western half of Europe (none from the Iron Curtain countries), and most of the papers dealt with that area. Scandinavian, German, French and of course Spanish representation was particularly strong. The doyen of the Congress was the Abbé Breuil, whose presence on the excursion following the session in Madrid, to see the palaeolithic art of the North Spanish caverns, was a notable link in the history of the subject.

The papers read contained a great variety of material in five languages that can only be covered by the official report, which may take several years to appear. Because of various deletions and insertions the published program is only a rough guide to what was actually delivered. However, it shows 157 sectional papers, of which nearly one third dealt with the Iberian peninsula, on which there were also several general lectures by the leading Spanish authorities.

A paper by Professor Almagro of Barcelona told of new developments in the excavation of the famous site of Los Millares, where the chambered tombs have been destroyed for road metal. There is now available the full diary of the man employed to make the original excavation. This will greatly facilitate the new digging begun recently since it includes the plans of the tombs as well as careful drawings and full descriptions of the grave goods in each.

Dr. Powell of Liverpool described a

megalithic chambered tomb (passage grave) on the island of Anglesey in Wales. It was cruciform and contained cremation burials in the side-chambers only. In the central chamber was a hearth. A number of the large side stones of the passage and chambers were decorated with elaborate pecked designs.

The discovery of a group of megalithic cist tombs near Dijon in France was reported by the Abbé Joly. Professor Nougier of Toulouse described a stratified cave at Bedeilhac near Tarascon in Ariège. The lowest stratum contains Cortaillod Neolithic pottery, according to Professor Nougier, with three other Neolithic strata above it. The top stratum is ascribed to the Early Bronze Age.

Professor Sprockhoff from Kiel presented the theory (opposed to that formerly maintained by northern archaeologists) according to which the northern megalithic passage graves should be derived from the west. He drew attention, however, to regional differences in North Germany and Denmark with indicated differences in original connections. The Danish passage graves, which seem to be related to those of Britain, differ markedly from the North German megaliths. However, a chamberless group of monuments near Hamburg, consisting of long mounds within a rectangular megalithic peristalith, might indicate connections with the Windmill Hill culture of England; they contained cremations burnt on the spot, the bones then buried with fragments of pots.

A paper by Dr. Moderman described the excavations begun on an extremely extensive "Danubian" village at Sittard in Holland. O. Klindt Jensen discussed a huge (600 liter) bronze Celtic cauldron found in Denmark and datable to Late La Tène I. At a lecture session at Santander during the cave excursion, the Abbé Breuil surveyed the evidence for the occurrences of representations in the East Spanish rock paintings of

a fauna not known in the area in more recent times, particularly elk.

An excellent exhibition of full scale reproductions of East Spanish rock paintings held in Madrid during the conference deserves special mention. The walls of five rooms carried over fifty panels, some up to ten feet long, of this primarily animal art, including some of the well known scenes with human figures. The extent, character and variety of this art can never have been demonstrated more vividly.

AAUW Grants

Thirty-five fellowship awards for 1954-55 have been announced by the American Association of University Women, of which two are for archaeological research.

CLARICE H. PENNOCK, graduate student at Radcliffe College, will study Greek and Etruscan terra-cotta sculpture of ca. 550-450 B.C. in order to place this art historically in relation to other ancient sculpture.

GLADYS D. WEINBERG, Editor of *ARCHAEOLOGY*, will make a historical study of Greek glass from Mycenaean times through the Middle Ages, tracing the development of glass in Greece.

Oriental Society Meeting

The one hundred and sixty-fourth meeting of the American Oriental Society was held in New York, April 13-15, 1954. Nearly two hundred members and their guests were in attendance. Among the eighty-three papers presented were many of archaeological interest.

In the Art and Archaeology Section B. W. Buchanan spoke on the date of the so-called Second Dynasty graves of the Royal Cemetery at Ur, proposing a later date for these graves on the basis of seals found in them. Edith Porada, in her paper "Remarks about some Syrian Cylinder Seals," attempted to arrive at a more precise classification of these seals than has heretofore been

possible, basing it on seal impressions found on datable clay tablets. Rachel Wischnitzer presented a new interpretation of parts of the mosaic of the Beth Alpha synagogue, finding in it elements of a rain-making ritual. J. M. Plumer, in his paper "Vishnu and the King," explained variations and apparent inconsistencies in the iconography of Nara Simha. M. S. Dimand spoke on early Islamic cut glass from Persia.

In the Linguistic Section we may mention B. P. Lozinski's paper on "The Language of the Sasanians and the Dating of the so-called 'Sasanian' Coinage and Art." He concluded that the art attributed to the Sasanians must be dated in the Parthian period, and that it is related to the art of China and India in the pre-Christian era.

In the Islamic Section G. E. von Grunebaum presented a paper on "The Hellenistic and Muslim Town," comparing their planning, political function and cultural structure. A. S. Ehrenkreutz discussed some aspects of the coinage of Islamic Egypt, attempting to elucidate the principles underlying the exchange rates between various types of gold coins.

In the Mesopotamia Section E. I. Gordon spoke on Sumerian proverbs found on tablets from Nippur, finding that these were originally assembled in a series of "books." S. N. Kramer presented an analysis of some of the Nippur tablets inscribed with literary compositions. Beatrice L. Goff spoke on "Mesopotamian Cylinder Seals as Amulets."

Two symposia were held in the course of the meeting. The first, conducted in collaboration with the Far East Association, was entitled "Critical Transition Periods." Max Loehr spoke on "Chou Art and the Art of the Nomads," Stella Kramrisch on "Critical Transition Periods and their Appraisal," Florence E. Day on "The Umayyad Period," and Aschwin Lippe on "The Artists of the Yüan Dynasty and the New Direction of Chinese Painting." The second symposium, "Authority and Law in the Ancient Orient," featured six speakers, each taking a geographical area as the subject of his paper. J. A. Wilson discussed Egypt; E. A. Speiser, Mesopotamia; H. G. Güterbock, Anatolia; I. Mendelsohn, Canaan and Israel; D. H. Ingalls, India; and D. Bodde, China.

American Research Center in Egypt

The trustees of the American Research Center in Egypt have announced that the Director of the Center for 1954-55 will be Dr. Bernard V. Bothmer, of the Boston Museum of Fine Arts. Mr. William K. Simpson, of the Metropolitan Museum of Art, has been appointed Research Associate of the Center for the same period. Those who wish to communicate with Dr. Bothmer may address him at 1, sharia el Shams, Garden City, Cairo, Egypt.

Peruvian Pottery Exhibit

Some two hundred of the best examples of Peruvian pottery from the Wasserman Collection recently acquired by Nathan Cummings of Chicago are on exhibit at the Art Institute of Chicago through the end of this year. The collection, which consists of approximately 1500 objects of gold and other metals as well as ceramics, dates from ca. 800 B.C. to the time of the Spanish conquest and is extraordinarily rich in Mochica style pottery. Pieces selected for exhibition at the Art Institute illustrate the evolution of this important civilization, with special emphasis on the strong and forceful style of the early Mochica people as contrasted with the suave and sophisticated pottery of the later period.

Guggenheim Awards

Of the 243 grants made by the Guggenheim Foundation for the year 1954-55, fourteen are for research in archaeology and allied fields. The recipients are as follows:

MILTON V. ANASTOS, Dumbarton Oaks Research Library of Harvard University. Studies in the intellectual history of the age of the Emperor Justinian I.

TRUEDELL S. BROWN, University of California, Los Angeles. Studies in the field of Hellenistic historiography.

THEODOR H. GASTER, Dropsie College. Studies of the Samaritans.

VIRGINIA GRACE, American School of Classical Studies, Athens. Studies of trade in the ancient Mediterranean as documented by stamped wine jars.

EVELYN B. HARRISON, American School of Classical Studies, Athens. Studies of ancient Greek stone sculpture.

ARTHUR W. HUMMEL, Library of Congress. Studies of Chinese history and culture.

BENNO LANDSBERGER, Oriental Institute, University of Chicago. Studies of the ancient languages and cultures of the Near East.

JAKOB A. O. LARSEN, University of Chicago. A historical study of the Greek federal states.

HENRY LUMPKIN, U.S. Naval Academy. A study of ancient Greek naval power.

HALLAM L. MOVIUS, JR., Harvard University. Studies of the origin and development of Upper Palaeolithic culture.

ANN L. PERKINS, Yale University. Studies of the archaeological history of Mesopotamia.

BEN E. PERRY, University of Illinois. Studies of ancient Greek and Roman fables.

PAUL S. WINGERT, Columbia University. Studies of the art of the South Pacific islands.

HERBERT E. WRIGHT, JR., University of Minnesota. Studies of Iraq and adjacent areas with special reference to the physical and climatic settings of their early cultures.

Menander in Dayton

A sculptured head reputed to be that of Menander, Athenian writer of comedies and friend of Epicurus, has recently been presented to the Dayton Art Institute. The head came from the collection of Lord MELCHETT, being part of the LUDWIG MOND Collection which was inherited by Lord MELCHETT from his father. This is the second time that this piece has been placed on public view. The first time was at the Burlington Fine Arts Club in London in 1904.

The sculpture is made of the creamy marble of the type quarried near Ephesus. Scholars have dated it to the fourth century or early third century B.C., the time when Hellenistic sculptors were striving for realistic portraiture.

Old World Chronology

THE ARCHAEOLOGICAL INSTITUTE OF AMERICA announces the publication of *Relative Chronologies in Old World Archeology*, the papers of a symposium sponsored jointly with the American Anthropological Association and published by the University of Chicago Press. The assembled papers present a survey of interlocking archaeological evidence for cross-dating between

regions, dealing primarily with the Neolithic Period and the Bronze Age. In the form of a compact reference volume, they present the foundations of a coordinated chronological structure, with comparative tables, line drawings and bibliographies.

The contributors and the regions covered are: Helene J. Kantor, Egypt; W. F. Albright, Palestine; Robert J. Braidwood, Syria; Ann L. Perkins, Mesopotamia; Donald E. McCown, Iran; Hetty Goldman, Southeastern Anatolia; Saul S. Weinberg, The Aegean; Robert W. Ehrich, South-eastern and Central Europe; Lauriston Ward, China.

The list price is \$2.50; a special price of \$1.25 is offered to INSTITUTE members. Orders should be sent to the General Secretary of the ARCHAEOLOGICAL INSTITUTE OF AMERICA, Andover Hall, Cambridge 38, Mass.

Expedition to Iraq

The Iraq-Jarmo project, the prehistoric field aspect of the Oriental Institute of the University of Chicago's present program in western Asia, has again been activated for the season 1954-55, under the general direction of Robert J. Braidwood of the Oriental Institute and the Department of Anthropology at Chicago. Dr. Bruce Howe of the Peabody Museum, Harvard University, will have charge of the affiliated operations of the Baghdad School of the American Schools of Oriental Research; Dr. Howe has been appointed Baghdad professor of the School for 1954-55. Professor H. E. Wright, Jr., of the Department of Geology at the University of Minnesota, will continue his physiographic and climatological studies with the aid of a Guggenheim fellowship. The project has been able to expand its concern with the reconstruction of the ecological situation which obtained at the time of the appearance of the village-farming community, through a generous grant made to the Department of Anthropology of the University of Chicago by the National Science Foundation. Professor Frederick R. Matson of Pennsylvania State University and Professor Charles R. Reed of the University of Illinois will, respectively, be concerned with Radiocarbon dating and with comparative zoological problems.

In the fall of 1954, the project will be chiefly concerned with a survey of the

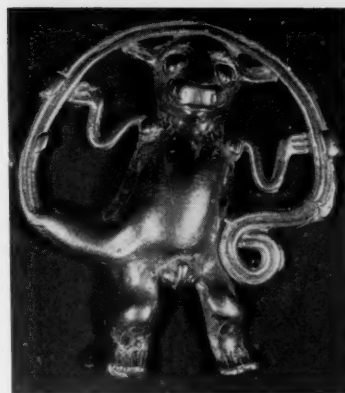
Pre-Columbian Gold

The Minneapolis Institute of Arts has recently announced the acquisition of gold figures and objects of personal adornment from sites in the Canal Zone, Panama and Costa Rica. All are Pre-Columbian in date, and all but one come from burial areas at Howard Air Field, Venada Beach, in the Canal Zone near the town of Sona, Veraguas Province, Panama. The cast gold figure of a man holding a rattle which is illustrated below (height $2\frac{9}{16}$ inches) came from the south central area of Costa Rica. Another interesting figure is that of a monkey holding its tail looped



drainage basin of the Greater Zab River, east of Mosul in Iraq. During the winter months a tour of the more westerly sites (Mesopotamian Turkey, Syria, Lebanon and Jordan) which include the range of materials from the terminal food-gathering stage to those of the established village-farming communities will be made, for purposes of both archaeological and ecological reappraisal, and it is anticipated that key Carbon 14 samples will be collected. In the spring of 1955, the project hopes to complete its commitments at Jarmo, Palegawra and possibly one or two other surface sites in the Chemchemal valley in Iraq.

Understanding of the revolutionary



over its head. This figure (height $2\frac{9}{16}$ inches), like that of the man, was cast by the lost wax process. It was found in a burial near Sona, Panama. A group of four frogs cast in one mold with connecting links came from a Venada Beach burial. The other pieces include a necklace of cast gold tubular beads, three cast pendants, three circular breast plaques and two nose rings, one of bluish stone tipped with beaten gold. One pendant has the form of an alligator with spangles on the back. Another is formed of a double zoomorphic figure with three spangles and an inverted figure with an elaborate head-dress. The third, rather elaborate, pendant probably represents a jaguar. This pendant comes from a burial site at Venada Beach which not only reveals a culture similar to that of the Coole people over one hundred miles to the north, but also provides a link with South American metalwork.

transition from the food-gathering stage to that of an effective agriculturally based village-farming community calls for a subtle grasp of both the cultural and ecological factors which must have been involved. Heretofore the approach has tended to be a haphazard one, with the archaeologist attempting his own ecological as well as cultural generalizations and theories. In its plan to coordinate the field efforts of both archaeologists and natural scientists in a primary locus of the transition, the Iraq-Jarmo project hopes to contribute evidence for a new and broader grasp of the subtle interrelationships of cultural and environmental factors at a critical point in history.



BRIEF NOTICES OF RECENT BOOKS

Exploring the Past

Archaeology in the Field, by O. G. S. CRAWFORD. 280 pages, 43 figures, 25 plates. Frederick A. Praeger, New York 1953 \$8.50

Perhaps no archaeologist has contributed more to the development of modern archaeological "field" work than has CRAWFORD, who pioneered in it over forty years ago and has been active in this work ever since. The present volume is, in a sense, a summation of the author's experience. Some of the information has previously been published in smaller parcels; its incorporation in this larger work gives it greater meaning. Since most of CRAWFORD's experience in the "field" has been in Britain, more than half the book is taken up with problems in British archaeology and methods for their solution.

CRAWFORD's use of the term "field archaeology" is peculiarly British. He defines it as the observation, and recording, of surface indications; it does not include excavation. Certainly archaeological work "in the field" anywhere else refers primarily to excavation, and this might cause misunderstanding of the contents of this book, which might otherwise be termed "archaeological prospection" or "reconnaissance." But since CRAWFORD explains his terms early, there is no doubt for very long.

After defining archaeology in terms with which few modern archaeologists could differ, CRAWFORD traces the history of the study in Britain. The dependence of archaeology on maps is discussed before taking up modern "field" methods, especially air photography. CRAWFORD then turns to the specific and goes into special realms in which "field" methods have made great contributions in Britain, as for instance: Roman roads, Celtic fields, prehistoric linear earthworks, camps, huts and houses, megalithic monuments and round barrows, defensive linear earthworks, mediaeval castle mounds and parks. In each case the author illus-

trates the applicability of the methods described to similar problems elsewhere. It is amply demonstrated that the British not only pioneered successfully in such "field archaeology" but that they early took a lead which they have steadily increased.

To this particular aspect CRAWFORD turns in a chapter on "Field Archaeology in Other Lands." He explains why England has led the rest of the world and the reasons are interesting: 1) raw materials are generally more abundant and better preserved than elsewhere, 2) there exist maps on a scale large enough to annotate in the field, and 3) in the past, persons of means, leisure and intelligence made their homes in the country, not in towns. The second factor, the only controllable one, points out the need for large-scale maps of all regions. We do not really know how abundant remains are until such work is undertaken on a large scale; the professional archaeologist and his students will have to replace the leisured gentlemen, for the work must go forward. In each region archaeologists will recognize their own problems and realize the possibilities of "field archaeology" in the British manner. Nowhere is the scope greater than in the Americas, where as yet little has been done. However, the VON HAGEN expedition to Peru can be called "field archaeology" as defined here. So, too, is the recent survey in Iraq conducted by JACOBSEN for the American Schools of Oriental Research. CRAWFORD's call is not going unheeded.

The same vision which made CRAWFORD pioneer in "field archaeology" now causes him to call for a closer association of archaeology and anthropology, for more attention by the anthropologist to the accurate description of contemporary material cultures, for more knowledge of anthropology by the archaeologist, and especially for more use of ethnology in interpreting the "dead" remains of the past. The chapter on "Living Prehistory in Central Africa" illuminates admirably the

possibilities of such cross-fertilization of related disciplines. Finally, CRAWFORD points out the need for museum workers to be allowed more time in the field. The whole lesson of this useful book might be summed up as follows: you cannot be an archaeologist in an armchair. CRAWFORD is so right!

SAUL S. WEINBERG

University of Missouri

Maya History

The Historical Recollections of Gaspar Antonio Chi, by M. WELLS JAKEMAN. iii, 45 pages. Brigham Young University, Provo, Utah 1952 (Publications in Archaeology and Early History, No. 3)

GASPAR ANTONIO CHI was a Maya Indian of prominent family who, born about 1531, seems to have been the best educated native in Mérida, Yucatan, shortly after the conquest of the Maya. Master of Spanish, Latin, Maya and Nahuatl (Aztec), he became Royal Interpreter to the Spanish government in Yucatan. Well versed in Maya customs, history and traditions, it was to him, naturally, that the Spanish turned for information on aboriginal days. He supplied Bishop DIEGO DE LANDA with much of the information embodied in the latter's *Relación de las cosas de Yucatan*, our most valuable source on the later Maya.

When the Spanish Crown, in 1577, desirous of obtaining first-hand information on its new possessions, sent a questionnaire to all *encomenderos* ("land barons"), they naturally turned to CHI for the answers to the two questions concerning native life, past and present. Twenty-five *encomenderos* of the Mérida region sent in their *relaciones*; these were finally published in 1898 in *Colección de documentos inéditos*. . . . Vol. 12, Series 2, Madrid. They have never before been published in a full English translation.

The part that GASPAR ANTONIO CHI played in these reports has long been known, since eleven of the writers

specifically acknowledge his aid. JAKEMAN, by a close comparative study of the sections, which often agree verbatim, concludes that CHI, on seven different occasions, supplied the *encomenderos*, singly or in small groups, with the desired information for twelve of the reports, dated 1579 and 1581.

The above data and deductions are given in JAKEMAN's introduction. The next twenty pages reprint the original archaic Spanish of the twelve reports, grouped according to the seven narrations determined by JAKEMAN; their translation into English is given in the final seventeen pages. The translation is not in sequence and, since there is naturally much duplication of data, JAKEMAN has rearranged it under seventeen topics such as "The Ancient City of Itzamal," "Food and Drink," "Warfare," "The Spanish Invasion," etc., with footnote references to the original report for each statement. Occasional words and phrases, apparently considered unimportant or trivial by JAKEMAN, have been omitted, the lacunae properly indicated; probably it would be better to have made the translation complete and full.

While the information contained in these reports is not new to Maya specialists, JAKEMAN's edition makes them for the first time available to those to whom the *Documentos inéditos* are unavailable, or who find the sixteenth-century Spanish of quasi-literate colonial landlords beyond their capabilities.

J. ALDEN MASON

University Museum
University of Pennsylvania

Mexican Pictorial Art

Magic Books from Mexico, by C. A. BURLAND. 31 pages, 16 colored plates. Penguin Books, Baltimore 1953 \$0.95

This little book is an esthetic gem, from the cover, decorated with Mexican glyphs in color, to the colored plates.

"Never before have the works described in these pages been introduced to the general public." For the books or codices of the Aztecs and Mixtecs of Mexico, in color reproduction, have heretofore been expensive and esoteric, available only in large specialized libraries. The originals are the prized possessions of libraries and museums, mainly in Europe and especially in

England, whither they were sent in early colonial days. Some of them are purely aboriginal, written—or rather painted—before the Spanish conquest; others date from the earliest colonial days. The sixteen plates herein reproduce, in their bright polychrome colors, specimen pages from nine of the best-known codices, showing historical, legendary and mythological scenes, and pictures of the deities.

Mr. BURLAND, in the delightful phraseology of the cultured Englishman, first gives the background of the period and then an accurate summary of the nature of the extant codices, their history and general content. Then he describes at length each of the sixteen plates, thereby giving an excellent epitome of ancient Mexican religion, theogony, and ceremonial. The great attraction of the book, however, naturally is the plates themselves.

J. ALDEN MASON

University Museum
University of Pennsylvania

How Archaeology Grew

Archäologie, by ANDREAS RUMPF. 143 pages, 12 plates. Walter De Gruyter & Co., Berlin 1953 (Sammlung Götschen Band 538)

Every student should be interested in the history of his particular field of study lest he be like the gardener (to use A. VON HARNACK's fine metaphor) trying to plant cut flowers. Such a history must comprise not only the flowers themselves (the scholarly discoveries) but also accounts of their growth (the methods by which the discoveries were made) and of the plans according to which they were grown (the purposes of scholarly investigations). Many of our contemporary archaeologists, just like their colleagues in other fields, are often too preoccupied with modern methods and with recent discoveries to concern themselves with the work of their predecessors before and during the period of the great excavations (1870-1914). RUMPF's concise and yet complete account of the history of archaeology is therefore of particular value, especially since it is written in simple German and published in an inexpensive edition.

After a brief but splendid introduction, RUMPF covers in less than 130 small pages the general course of archaeology from Herodotus to our own

time. He emphasizes that the most recent period, since 1914, cannot yet be adequately assessed (pages 123-35), but the main part of the book reveals great learning and excellent judgment.

A. E. RAUBITSCHKE

Princeton University

History of Indian Art

The Art and Architecture of India, by BENJAMIN ROWLAND. xvii, 289 pages, 190 plates, 49 figures. Penguin Books, Baltimore 1953 (The Pelican History of Art) \$8.50

This work is one of the first four of the forty-eight volumes of the *Pelican History of Art*. It is appropriate that the first one should concern India, since the East, up to very recent times, has been in the realm of art an unknown, and even a condemned, world.

The Art and Architecture of India develops the account of the traditions in ethnic groups and geographic areas. The story opens with some clearly stated qualifications that aid greatly in setting the position of this history. First, there is the acknowledgment that it is difficult to write for a Western audience that can have little concept of art as devotion, but regards it rather as an aesthetic luxury that strains after the fleeting moment. Furthermore, it would scarcely be possible in this short history to make the meaning of many forms and terms of the remote art of India immediately clear, yet I have not seen elsewhere so successful an effort to show Western readers the essential matter of a tradition of sculpture informed by the discipline of *yoga*.

This history is a sympathetic account of the growth of the tradition of Indian art. It is not at all, on its first level of intention, an essay into Buddhist or Hindu metaphysics, yet the author shows the resources and the timelines of the metaphysical tradition in manifold aspects, since for the most part he is concerned with the language of iconography. In Part One there is a description of the Indus Valley civilization and a discussion of the Epic Period. This includes a clear account of the basic Indian religious traditions, with stress laid on their essential consanguinity. In Part Two, The Early Classical Period, the essential forms, directions and principles of the tradition in architecture and sculpture are described, and transfer of many of

these forms to Buddhist rock-cut sanctuaries is explained. Part Three, Romano-Indian Art in Northwest India and Central Asia, contains the clearest description of this phase of Buddhist expansion that has been written in our times. It makes one hope ardently that there may be other works to come on this same area. Perhaps the high point of this lofty story of Indian art is reached in Part Four, in the times of the Later Andhra and the Gupta, the Golden Age of the final recension of the Mahabharata and the renewed popularity of the Ramayana, the time of the classic Indian drama and of the paintings of Ajanta. But if the arrangement of the pattern of Indian art is the purpose of this work, Professor ROWLAND's greatest help to Western students comes in Part Five. This deals with the period of the Hindu Dynasties, here called the Hindu Renaissance. Instead of taking the term mediaeval for the art of this period, as Dr. COOMARASWAMY does, Dr. ROWLAND calls it essentially baroque. It is difficult to see how any of the works of architecture described, from the groups at Patadakal to the temple at Somnathpur and the Hoysalesvara temple at Halebid, could be called anything other than baroque. Part Six is Indian Art in Ceylon and Southeast Asia, with chapters on Ceylon, Cambodia, Siam, Burma and Java. The last chapter is notable primarily for the analysis and description of the Buddhist temple at Barabudur on the island of Java.

If only a few of the forty-eight volumes of the series are as good as *The Art and Architecture of India*, another general history of art will not be needed in English for many a day.

RICHARD ALDRICH
University of Miami

Mediaeval Science in the West

Augustine to Galileo: The History of Science, A.D. 400-1650, by A. C. CROMBIE. xv, 436 pages, 12 plates, 50 figures. Harvard University Press, Cambridge 1953 \$8.00

This book fills a need for a short history of science that utilizes recent research. It tells the story of Western science from its decay after the collapse of the Roman empire in the West to its resurgence in the seventeenth century, revealing continuity of Western scientific tradition from Greek times to the

scientific revolution three centuries ago. A brief treatment of ideas about the natural world in western Christendom, from the Dark Ages to the twelfth century, is followed by the system of scientific thought derived from Greek and Arabic sources and accepted in the thirteenth century. This system is described with factual additions and modifications made during the century or more following its introduction. Relations of technical activities to science during the entire mediaeval period provide categories of information useful to varied groups of readers. Development of ideas on scientific method and criticisms of fundamental principles in the system that found favor from the end of the thirteenth to the close of the fifteenth century prepare the way for more radical changes of the sixteenth and seventeenth centuries that led to the scientific revolution. The text is provided with a wealth of historical references to scientific contributions and their authors. An admirable twenty-page bibliography brings the text to a close.

Professor CROMBIE is in the Department of History and Philosophy of Science, University College, London, and is Lecturer in the History of Science, Oxford University. This work was published first in London, 1952. The Harvard edition is well printed and has practically no typographical or other errors. The volume merits a place in every historical library.

WILLIAM GABB SMEATON
Columbia, Missouri

An Anthropological Study

The World of Primitive Man, by PAUL RADIN. xi, 370 pages. Henry Schuman, New York 1953 \$5.00

Dr. RADIN's book is characteristically different from the usual run of anthropological literature and resembles some of his earlier writings in being strongly psycho-philosophical.

He has endeavored, successfully to this reviewer's mind, to give his readers a feeling for the world view of primitive peoples. His approach is more through the individual than through the society as a whole, and the technique utilized is one of comparison—the generalized primitive (as represented often by specific examples) against the contemporary Euro-American world view. Especially interesting

are some chapters of Part One which discuss psychological types, and most of Part Three, "Man and His World in Myth, Literature and Philosophy." Materials of this order are unquestionably Dr. RADIN's forte.

While Dr. RADIN's extensive experience as an anthropological field worker and theoretician is not to be undervalued, he fails, at times, to make clear the manner in which his insights into both primitive and civilized psychologies have been gained. More specific instances might have been cited to substantiate his conclusions. Many anthropologists and workers in allied fields could take issue with various theoretical aspects of his work and with some of his generalizations. While the author excuses himself in advance for some of these, there are others which are open to question. The orientation appears to have large components of cultural evolutionary theory and of the theory of the Viennese Kulturkreislehre. Neither of these doctrines has been too popular in recent times with anthropologists in the United States.

The publishers have not given the book the care it deserves. For all that it is intended for a general lay audience, the format, especially the binding, resembles that of a text. In addition there are a number of indications of hasty editing.

ROBERT F. G. SPIER
University of Missouri

Troy in the Second Millennium

Troy. The Sixth Settlement, by CARL W. BLEGEN, JOHN L. CASKEY and MARION RAWSON. Volume III, part 1: text, xxix, 418 pages. Part II: plates, xxxv pages, 512 figures. Princeton University Press, Princeton 1953 \$36.00

The third volume dealing with the excavation and publication of Troy, one of the most celebrated sites of the ancient world, matches the excellence and thoroughness of the previous volumes. Devoted to the Sixth settlement of Troy, its goal is to "give a factual account of the work that was carried out, and an objective description and classification of the remains that were brought to light, together with the pertinent information regarding the circumstances of their discovery." That goal is excellently attained. The finds are presented in the most thorough way and the conclusions based on them are

devoid of conjectures, theories, and speculations.

A good part of the Sixth settlement was dug up by SCHLIEMANN and DOERPFELD and the latter recognized in it the city of Priam. The excavations of the University of Cincinnati, however, have proved that the Sixth is not the famous Homeric city, but a royal stronghold that attained its maximum prosperity and strength around 1400 B.C. The central part of the settlement, on the highest point of the hill, was "telescoped" when, in Hellenistic and Roman times, the temple of Athena was constructed and the building which had occupied that area, presumably the palace of the ruler, was completely destroyed. A number of houses, however, were preserved in the lower terraces and in the periphery and they, together with the well known, magnificent fortification walls, imply advanced knowledge of architecture and economic prosperity. These architectural remains and the objects discovered with them, especially the pottery and metal, stone and bone objects are discussed in a thorough and masterly fashion.

Of great interest is the cemetery some 500 meters from the citadel,

which yielded urns containing cremated remains, proving that in the closing phase of the settlement (ca. 1300 B.C.) cremation was practised. Few furnishings were found, and this leads the authors to suggest that the burial ground "was used principally by people in the humbler ranks of Trojan society." Perhaps it could better be attributed to current burial customs that did not require *kterismata* (grave offerings). We may recall that in later years no special gifts were placed even on the pyre of Hector and that he was burned in his *pharea* (cloak or shroud).

The new cultural elements in the Sixth settlement in the realm of architecture (excellent fortifications, well built, spacious, free-standing houses, the transformation of a site that was the abode of a relatively numerous population into the seat of a ruler and his entourage) and ceramics (Minyan pottery appearing suddenly without local antecedents) lead the authors to conclude that Troy VI marked a new era, a definite break in the old tradition of the Early Bronze Age, and that a new people was responsible for that break. They brought the domesticated horse and, after a while, looked to the

west and the Aegean for peaceful communication. Minyan pottery, which is characteristic both of the Greek mainland and also of Troy VI, is the basis for the authors' suggestion that this new people "may have constituted one branch in the folk movement that overran the Mainland of Greece" at the end of the Early Helladic period. The custom of cremation, which seems to be current in the later phase of Troy VI, is not to be found in the Greek mainland in the Middle Bronze Age and the earlier Mycenaean periods; but that custom could have been picked up and developed independently by the invaders of Troy.

Troy VI was destroyed by an earthquake around 1275 B.C. Its beginnings, equated with the beginnings of the Middle Helladic period, are placed around 1800 B.C. Thus the great city had a long life attested by the eight phases which characterize its remains.

The world of scholarship will again be indebted to the authors for an exemplary piece of work, a model of scientific presentation of archaeological discoveries.

GEORGE E. MYLONAS

Washington University

EARLY ANCÓN and EARLY SUPE CULTURE

by Gordon R. Willey and John M. Corbett

Rounded out here is archaeological data on the famous Ancón and Puerto de Supe sites in central Peru. The book is a scientific report on excavations made in this area in 1941-42 under the direction of the Institute of Andean Research. It studies a period estimated at about the first millennium before the Christian Era; the authors deal especially with the concepts of period and horizon as means of understanding Peruvian prehistory. The book—illustrated with 31 photographs of the sites and of objects found there, with 17 tables, 29 figures, and 5 maps—gives detailed reports on every aspect of the expedition, including the excavations themselves, the ceramics, artifacts, metals, animal remains. The authors incorporate recent research into their picture of what this long-ago culture was like. *Columbia Studies in Archaeology and Ethnology, No. 3.* \$5.00

COLUMBIA UNIVERSITY PRESS • 2960 Broadway, New York 27

Ancient Cyprus

Enkomi-Alasia I. Nouvelles missions en Chypre 1946-1950, by CLAUDE F. A. SCHAEFFER. ix, 449 pages, 140 figures, 121 plates (4 in color). Klincksieck, Paris 1952 (Publications de la Mission archéologique française et de la Mission du Gouvernement de Chypre à Enkomi, Volume 1) 9800 frs. (\$28.00)

The most impressive excavation of the second millennium B.C. on the island of Cyprus is certainly Enkomi. Long known for its Bronze Age tombs, the site became the scene of renewed excavation by the French in 1946, under the direction of Dr. Schaeffer, the renowned excavator of Ras Shamra. In 1947 a joint mission was formed with the Department of Antiquities of Cyprus, for which Dr. Porphyrios Dikaios thereafter conducted excavations on part of the site while the French continued their work in other areas. The vastness of the settlement leaves ample room for such cooperation; actually the excavations have not been carried on concurrently and the publication will be done independently by each group for its respective areas. It will thus be necessary to wait for the account of

both camps before the evidence can be fully coordinated.

Dr. Schaeffer has adopted the plan of publication he used at Ras Shamra: a series of volumes which contain at the same time preliminary reports of the successive campaigns together with final publication of certain important groups of objects or single objects. Such a combination is this first volume of the French reports. It contains, first, a chapter by M. René Dussaud identifying Enkomi with Alasia, the capital of Cyprus, well known from inscriptions of the second millennium B.C. There are lengthy sections on the campaigns of 1946-47, 1949 and 1950, during which the limits of the town and its fortifications were traced and partially explored and several large sections within the walls were excavated. The most notable result was the excavation of a large building of fine ashlar masonry, such as is now known more generally from both the French and Cypriote sections, as well as from a British excavation at a Late Bronze Age sanctuary in the western part of the island. The reader must constantly bear in mind that this is but a preliminary report, that work is still in progress and that the total

evidence from both sections of the joint project must be available before the dates and series of events outlined here can be accepted.

The final reports in the volume consist chiefly of accounts of several tombs, the rich offerings in which cover the whole range of the Late Bronze Age and the beginning of the Early Iron Age. The finest single object is the encrusted silver bowl to which a chapter is devoted, including the valuable technical report of Mr. H. J. Plenderleith of the British Museum. The excellent color plates of the bowl do it full justice. Besides the objects from tombs, there are presented a hoard of thirty-seven bronzes, special types of stone dome-shaped seals and cylinder seals, a gold-encrusted bronze statuette of an Egyptian god, a group of bronze statuettes, and some limestone blocks with graffiti. Finally, an appendix by Olivier Masson lists all the new finds of inscriptions in Cypro-Minoan characters from Enkomi. All these accounts are profusely illustrated. The ensemble presents a mass of new material which will prove of great value to students of the Mycenaean world and the East Mediterranean. The brief notices of

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subsequent work by the French and by the Department of Antiquities of Cyprus indicate that this is but the beginning and we can expect much more material of equal or greater value from this ancient capital of Cyprus.

SAUL S. WEINBERG

University of Missouri

Two Hoards of Greek Coins

A Third Century Hoard of Tetradrachms from Gordion, by DOROTHY HANNAH COX. vi, 20 pages, 8 plates, 1 map. The University Museum, University of Pennsylvania, Philadelphia 1953 (Museum Monographs) \$0.75

In 1951 a find of 114 silver pieces was made at Gordion in Turkey. Of the total, 102 tetradrachms are posthumous spread-flan Alexanders, issues of the earlier Seleucid rulers, and coins of Lysimachus of Thrace; the remaining twelve pieces were struck by various Macedonian, Bithynian and Pergamene kings and by the mint of Perga.

Miss Cox has used the collections of the American Numismatic Society in cataloguing the Alexander pieces from Gordion, and the resulting attributions represent a valuable addition to the published record of the late mints. Several barbarous imitations of Alexander types are included in the hoard; the tentative identification of these as Galatian rather than Danubian copies is of deep interest.

A burial date of ca. 210 B.C. for the hoard, based on evidence from the site and on the condition of dated Aradus and Antiochus III coins, has important implications. The excellent preservation of two coins with Poseidon head obverse and seated Apollo reverse, previously assigned either to Antigonos Gonatas or his successor Antigonos Doson, indicates that the type continued into the latter's reign. Evidence of wear also supports the attribution of one Pergamene issue to Eumenes I rather than to the second ruler of that name. Two autonomous Perga coins, generally dated in the second century B.C., were in the hoard and, therefore, belong in the late third century. Miss Cox suggests 218 B.C. as a historically justifiable date for the opening of that Pamphylian mint. The spread-flan Alexanders of the Gordion deposit, representing a wide range of mints, must likewise be regarded as third century coinages. Heretofore, it had been

assumed that most of these issues were struck after the battle of Magnesia in 190 B.C., but Miss Cox feels that a large scale re-introduction of the Alexander type in Asia Minor probably began some forty years earlier, ca. 229/8 B.C.

A Hoard of Silver Coins from Carystus, by DAVID M. ROBINSON. 62 pages, 6 plates. The American Numismatic Society, New York 1952 (Numismatic Notes and Monographs No. 124) \$3.00

This hoard of ninety-two coins, said to have been unearthed at ancient Carystus, is important in view of the amount of Euboean material made available. Thirty-one examples of the federal coinage of Euboea and forty-five staters and drachms of Carystus were found in association with tetradrachms of Athens, staters of Elis, drachms and tetradrachms of the Alexander type (one with the name of Seleucus I) and a tetradrachm of Antiochus Hierax which dates the burial of the hoard to ca. 230 B.C.

Dr. Robinson's chronological arrangement of the Euboean issues is his fundamental contribution and its validity can be adequately assayed only in relation to the exhaustive study of Euboean coinage now being made by Dr. William P. Wallace. Here we can only note that the heavy reliance on stylistic criteria and the deliberate disregard of relative wear are to some extent disconcerting.

With respect to the Alexander type coins, there are errors which strikingly illustrate the danger of mint identifications based solely on symbols or monograms. For example No. 83 is attributed to Amphipolis "since the caduceus is a frequent symbol of that mint." However, in Newell's publication of the Demanhur Hoard (*Numismatic Notes and Monographs* No. 19), which deals only with Alexander issues prior to 318 B.C., the caduceus is found as the sole marking on the tetradrachms of two other mints and in conjunction

with monograms on those of three more. The obverse style of No. 83 is quite alien to that of the Amphipolis mint. On the basis of Newell's arrangement of the Alexander material it is to be associated either with Pella or another northern Greek mint. More serious is the definite identification and dating of No. 85 as a coin of Seleucus I, mint of Seleucia 305/4 B.C. Since the Carystus Hoard specimen is broken where Seleucus' name would have been inscribed, it seems evident that the attribution is based on the rather common monogram which appears in the left field. This monogram, or a variety of it, was used at Seleucia under Seleucus, but it was also used elsewhere, and the obverse style of No. 85 is certainly later than that of the Seleucid pieces. Actually the issue belongs to Magnesia-on-the-Maeander, as is proved by a British Museum coin struck from the same obverse die. The Magnesia type with a similar monogram is published in Miss Cox's Gordion Hoard (see above) and there dated after ca. 240 B.C. If this dating is correct, the Carystus Alexander is roughly contemporary with the Antiochus Hierax tetradrachm which serves to date the burial of the hoard.

MARGARET THOMPSON

American Numismatic Society

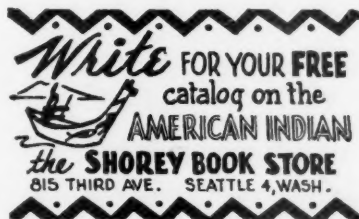
Ivory Carvings

Early Christian Ivories, by JOSEPH NATANSON. 34 pages, 51 plates. Alec Tiranti, London 1953 7s.6d.

This slim, pocket-sized volume is devoted to the art of the ivory in Early Christian times. After the briefest survey of the problems of style and iconography, Joseph Natanson considers first the ivories of the fourth and fifth centuries in terms of pagan and Christian ideas and the invasion of artistic ideas from the East. In dealing with the sixth century ivories, such as the Berlin pyx, the Archangel Michael ivory and the throne of Bishop Maximianus of Ravenna, he develops his presentation in terms of the flux of ideas which accompanied the formation of the art of Byzantium and points out their importance for European mediaeval art. This brief introduction with its excellent plates serves as intended as a concise chapter in the history of the art of Early Christian times.

HOMER L. THOMAS

University of Missouri



NEW BOOKS

Selected at the editorial offices from various sources, including bibliographical publications, publishers' announcements and books received. Prices have not been confirmed.

ARTZ, FREDERICK B. *The Mind of the Middle Ages, A.D. 200-1500: A Historical Survey.* xiv, 552 pages, text illustrations. Knopf, New York 1953 \$7.50

BASTIANELLI, SALVATORE. *Centumcellae (Civitavecchia). Castrum Novum (Torre Chiaruccia). Regio VII—Etruria.* 134 pages, 9 figures, 19 plates. Istituto di Studi Romani, Rome 1954 (Italia Romana: Municipi e Colonie. Serie I, Volume XIV) 800 lire

BECATTI, G. *Scavi di Ostia. Volume II: I Mitrei.* 153 pages, 125 figures, 39 plates. Libreria dello Stato, Rome 1954 (\$17.50)

BENNETT, WENDELL C. *Ancient Arts of the Andes.* 186 pages, 202 figures (6 in color), maps. Museum of Modern Art, New York 1954 \$6.50

BERNDT, RONALD and CATHERINE. *The First Australians.* 144 pages, 27 figures. Philosophical Library, New York 1954 \$4.75

BLÜMEL, CARL. *Antike Kunstwerke.* 39 pages, 19 figures, 51 plates (1 in color). Akademie Verlag, Berlin 1953 (\$4.00)

CALABI, IDA. *L'uso storiografico delle iscrizioni latine.* 266 pages, 32 plates. Istituto Editoriale Cisalpino, Milan 1953 (Biblioteca storica universitaria, Serie I, Trattati, Volume III) 2000 lire

CONZE, EDWARD (editor). *Buddhist Texts through the Ages.* 323 pages. Philosophical Library, New York 1954 \$7.50

CRESSIDI, GIULIO. *Velitrae (Velletri). Regio I—Latium et Campania.* 136 pages, 11 figures, 12 plates, 2 plans. Istituto di Studi Romani, Rome 1953 (Italia Romana: Municipi e Colonie. Serie I, Volume XII) 600 lire

CROME, J. F. *Il Volto di Virgilio.* 23 pages, 13 plates. Accademia Virgiliana, Mantua 1952 1000 lire

CURIEL, R., and D. SCHLUMBERGER. *Trésors monétaires d'Afghanistan.* 131 pages, 16 plates. Imprimerie Nationale, Paris 1953 (*Mémoires de la Délégation archéologique française en Afghanistan*, 14) 2200 fr.

DAVIES, NORMAN DE GARIS. *The Temple of Hibis in El Khargeh Oasis. Part III: The Decoration.* xi, 35 pages, 80 plates in portfolio. Metropolitan Museum of Art, New York 1954 (*The Metropolitan Museum of Art Egyptian Expedition, Volume XVII*) \$35.00

DE BURGH, W. G. *The Legacy of the Ancient World.* 2 volumes. xxiii, 612 pages. Penguin Books, London 1954 5s.

DELLA CORTE, MATTEO. *Case ed Abitanti di Pompei.* Second edition. xxxii, 431 pages, 2 plans. "L'Erma" di Bretschneider, Rome 1954 3500 lire

DE SANCTIS, GAETANO. *Storia dei Romani. Volume IV, Fascicule 2, 376 pages.* La Nuova Italia, Florence 1953 3500 lire

FELLETTI-MAJ, BIANCA MARIA. *Museo Nazionale Romano, I Ritratti.* 178 pages, 329 figures. Libreria dello Stato, Rome 1953 5000 lire

GARDINER, A. H., and T. E. PEET. *The Inscriptions of Sinai.* Second edition revised and augmented by J. CERNY. Part I. Introduction and plates. 22 pages, 96 plates. Egypt Exploration Society, London 1952 £5.15.0

GRANT, MICHAEL. *Roman Imperial Money.* x, 324 pages, 88 figures, 41 plates. Thomas Nelson and Sons, Ltd., Edinburgh 1954 £2.10.0

Grosser Historischer Weltatlas. I. Teil. Vorgeschichte und Altertum. viii, 15 pages, 44 plates. Erläuterungen von H.

BENGTSON and V. MILOJČIĆ. *Bayerische Schulbuch-Verlag, Munich 1953 (\$1.70)*

HOWELLS, WILLIAM. *Back of History: The Story of Our Own Origins.* 384 pages, 58 figures. Doubleday & Company, New York 1954 \$5.00

JAMES, T. G. H., with the collaboration of M. R. APTÉD. *The Mastaba of Khentike Called Ikhekhi.* xii, 78 pages, 18 figures, 43 plates. Egypt Exploration Society, London 1953 (*Archaeological Survey of Egypt, Thirtieth Memoir*) (\$15.00)

JURY, WILFRED, and ELSIE MCLEOD JURY. *Sainte-Marie among the Hurons.* xiii, 128 pages, figures, 27 plates, map and plan. Oxford University Press, New York 1954 \$4.00

KROEBER, A. L. (editor). *Anthropology Today: An Encyclopedic Inventory.* xv, 966 pages. University of Chicago Press, Chicago 1953 \$9.00

LEIPOLDT, J., and S. MORENZ. *Heilige Schriften, Betrachtungen zur Religionsgeschichte der antiken Mittelmeerwelt.* 217 pages, 14 plates. O. Harrassowitz, Leipzig 1953 11 DM

LEISINGER, HERMANN. *Malerei der Etrusker.* 27 pages, 102 figures (16 in color). H. Kohlhammer Verlag, Stuttgart 1954 (\$4.50)

LUGLI, IOSEPHUS (editor). *Fontes ad topographiam veteris urbis Romae pertinentes. Volume II, libri 5-7.* 229 pages, 10 plates. Università di Roma, Istituto di Topografia antica, Rome 1953 2600 lire

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